MANAGEMENT AND DEVELOPMENT

VISION STATEMENT

The Peshtigo River State Forest is a healthy, dynamic forest, which contributes to the diversity of natural communities in the region. The forest and its resources are managed for present and future generations to provide a broad range of ecological, cultural, social and economic benefits within its capabilities. The natural scenic beauty of the Peshtigo River and its flowages is perpetuated by maintaining a predominately undeveloped shoreline. Compatible recreational opportunities are provided consistent with the scenic beauty and natural settings found within its forestland and along the river and its flowages.

PROPERTY GOALS

1. Manage the forest and its resources using principles of ecosystem management and sustainable forestry consistent with the ecological capability of the land.

2. Identify and protect rare, threatened and endangered species and areas of geological, archaeological, or cultural significance.

3. Maintain and enhance the natural, undeveloped scenic qualities of the state forest, especially those areas visible from the Peshtigo River and its flowages.

4. Protect and enhance the aquatic resources of the forest.

5. Provide a variety of quality outdoor recreational activities with a focus on non-motorized trail uses primitive camping and water access.

6. Continue links with the existing regional motorized trail network while maintaining environmental quality and harmony with other forest users.

7. Establish compatible, mutually supportive programs and infrastructure with Governor Thompson State Park and other partners for resource protection, education and recreation management.

8. Prevent or minimize conflict among different types of recreational uses and among various types of forest uses and management activities.

9. Acquire additional land for reasons of resource protection, critical development needs, access, boundary protection, boundary continuity, or protection from non-compatible uses.

10. Provide opportunities and access for hunting, fishing, trapping, and wildlife viewing.

11. Provide for a variety of renewable forest products, wildlife habitats and a diversity of terrestrial and aquatic communities consistent with the ecological capabilities of the land and water.

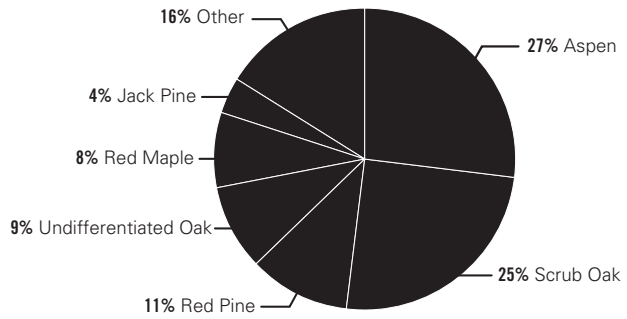
12. In consultation with tribal governments, provide for the availability and enhancement of treaty resources.

OVERVIEW OF THE FOREST

The forested portions of the Peshtigo River State Forest are part of a complex ecosystem, with a mix of biotic communities that provide habitat for a diversity of plants and animals. Most of the uplands have dry sandy soils that can support red and white pine, aspen, white birch, scrub oak, and jack pine forest communities. A few upland areas have loamier soils that support more mesic forest communities containing red oak. Most of the forest is biologically mature or over-mature, and some areas show signs of decline. The scattered wetlands and lakes on the property help protect water quality and provide habitat for a variety of fish, birds, insects, and plants, including many rare species. About 92% of the Peshtigo River State Forest is uplands, 7% is wetlands, and 1% is exposed bedrock. In addition to the forests and wetlands, there are also over 3,000 acres of water in four flowages and five miles of free flowing river in the Fly Fishing Area.

Figure 2.1 shows the general plant community makeup on the Peshtigo River State Forest. For inventory purposes, forest stands are classified by their dominant cover type. This means that forest stands listed as aspen have 50% or more of their basal area in aspen trees. Most forest stands contain a mix of tree species. For example, an "aspen" area probably includes a mixture of red and white pine, red maple, and scrub oak. Therefore, two forest stands with the same dominant cover type may not have the same overall forest composition.

FIGURE 2.1 COVER TYPES OF THE PESHTIGO RIVER STATE FOREST



** Note: Reconnaissance data is in the process of being updated.*

GENERAL LAND AND FOREST MANAGEMENT PROVISIONS

FOREST PEST CONTROL

As stated in Wisconsin Statute 26.30, "It is the public policy of the state to control forest pests on or threatening forests of the state…" Within the Peshtigo River State Forest, any significant forest pest events will be evaluated with consideration given to the property management goals and the potential threat of the pest to other landowners. Infestations of the non-native gypsy moth caterpillar will be managed according to the Forest's Gypsy Moth Management Plan. Responses to significant infestations from other forest pests may include timber salvage or pesticide treatments. Any response to a significant pest outbreak will be evaluated by an interdisciplinary team of scientists and communicated through press releases and notices to interested parties.

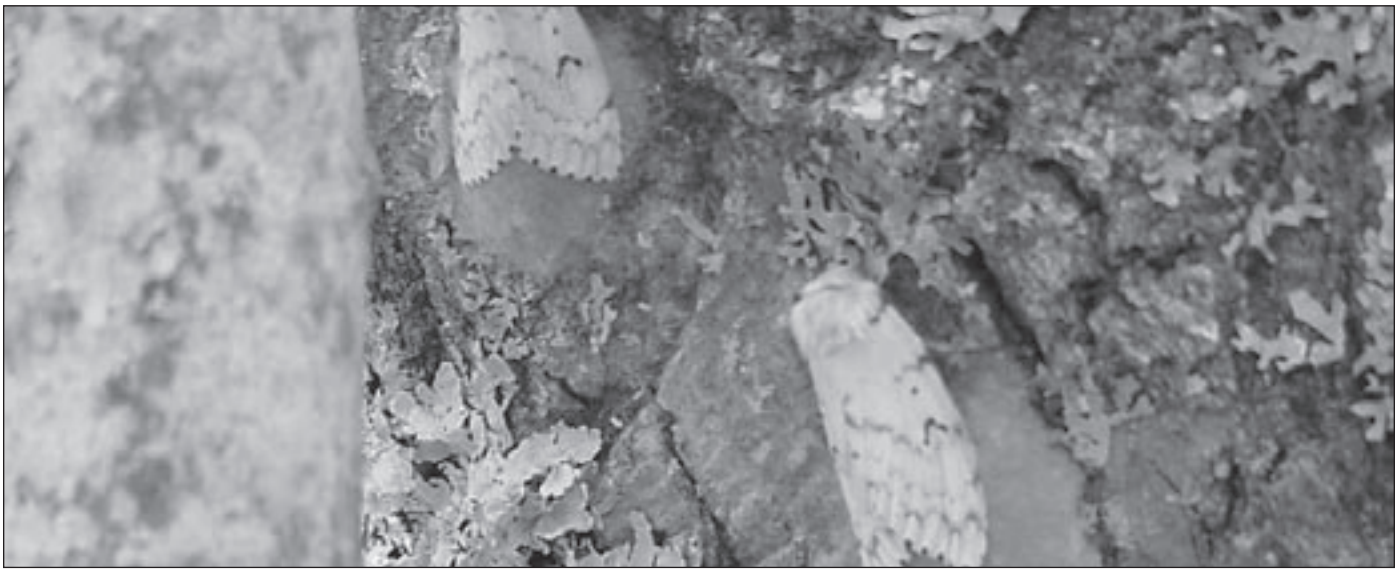
FOREST RECONNAISSANCE

The State Forest uses a forest inventory system to gather and record information on their lands. The database created from the inventory captures the physical description of these areas (dominant forest cover type, soils, ecological attributes, stand origin, guidelines, restrictions and goals). Reports are then generated to show forest stands that are listed for management review. The acreage listed for review is considered the forest's "sustainable harvest" meaning that the lands are due for a decision regarding management. Some stands inventoried in the reconnaissance are excluded from active management, for example, passive management zones contained in some of the native community management areas. Forestry staff then examines stands potentially due for management and verifies the information with a field visit. If the stand is not ready for management, their information is updated in the reconnaissance database and rescheduled for another review in the future. Those areas not ready for management and rescheduled are considered managed and counted as part of the forest's sustainable harvest acreage. If the forested areas are ready for management, the forestry staff consults with other Department programs such as endangered resources, fisheries, and wildlife to integrate a multifaceted approach to the management and subsequent sustainable harvest. When setting up the management, forestry staff follow guidelines and best management practices. After a management practice occurs, the forest reconnaissance is updated.

In the future, the State Forest will be using a Continuous Forest Inventory system in conjunction with the reconnaissance system. This system will track growth, mortality, and management of forested lands and allow for more concise management of state forest lands. Using the Continuous Forest Inventory system will not change the objectives stated in the master plan.

HERBICIDE USE

Approved herbicides may be used for various purposes on the forest, such as the control of invasive plants or to control plant competition in forest regeneration areas, except as restricted in the management prescriptions in this master plan. Prior to treatment, local governments and tribes will be informed of the areas where herbicide will be applied. Additional information will be provided upon request.



INVASIVE SPECIES CONTROL

If detected on state lands, invasive plants may be controlled using appropriate and effective methods, including but not limited to the use of herbicides, cutting, or hand removal. Control methods may be restricted in certain sensitive management areas.

BEST MANAGEMENT PRACTICES FOR WATER QUALITY

All management activities within the state forest will follow, as a minimum standard, the guidelines in the Wisconsin's Forestry's Best Management Practices for Water Quality (BMPs). A Field Manual for Loggers, Landowners and Land Managers is also available, DNR publication PUB-FR-093-95.

ENDANGERED, THREATENED AND SPECIES OF SPECIAL CONCERN PROTECTION

Five State or Federally Threatened Species, one State Endangered Species and twenty-five Species of Special Concern were identified through inventories on Peshtigo River State Forest by the Endangered Resources program. All management prescriptions in the master plan will consider the needs of these species and the potential impacts to the species and their habitat. Management actions being planned on the state forest are checked against an up-to-date database of listed species to assure that no department actions results in the direct taking of any known endangered or threatened resource.

PRESCRIBED FIRE

Prescribed fire may be used as a management tool where feasible and safe. It may be used to help regenerate many of the forest cover types on the forest such as the pine and oak types. It may also be used to create and maintain barrens habitat, wildlife habitat, to reduce fuels to lessen fire hazard and to control undesirable vegetation.

UNFORESTED UPLAND MANAGEMENT

Upland unforested habitat on Peshtigo River State Forest consists primarily of areas of grass forest openings, relict barrens, upland brush cover, rock outcrop complexes and right-of-ways. These areas are an important component of the early successional landscape of Peshtigo River State Forest and provide important habitat to a variety of plants and animals. Unforested uplands areas will be maintained to retain this habitat; encroachment by trees and invasive species are the primary maintenance need.

Peshtigo River State Forest staff and Department wildlife management staff will work cooperatively in management of the upland unforested habitat areas. Identification and mapping of areas should occur to facilitate maintenance evaluations at least every five years. Maintenance may include using herbicides, mechanical mowing, hand cutting, and prescribed fire. Buffering mapped areas adjacent to aspen harvests with a no-cut buffer will also aid in maintaining these areas.

GENERAL FOREST MANAGEMENT PRESCRIPTIONS, BY PRIMARY FOREST TYPE

For each forest-type there is a specific set of management techniques which favor the maintenance and regeneration of a given type. The following describes the general management prescriptions to be used for each primary forest type on the Peshtigo River State Forest. Each prescription will be applied wherever management for that specific forest type is an objective, as stated in the individual management areas later in this chapter. The individual area management plans may modify or limit these general prescriptions to fit the area.

ASPEN DOMINATED MIXED FOREST

This is an early successional forest type that requires disturbance and abundant sunlight to regenerate. It is typically managed with clearcuts and modified clearcut harvests of various shapes and sizes. Recommended harvests should occur at intervals of 45-60 years to maintain this forest type.

General Management Prescriptions

Different management activities will be used to move the forest toward its desired state depending on whether or not the stand is pure aspen or a mixed aspen community.

Consider the ecological value of aspen and surrounding landscape on the Peshtigo River State Forest. A variety of age classes and stand sizes across the landscape provide wildlife and aesthetic value. Some considerations in landscape planning include age classes and patch sizes across the landscape, the natural disturbance regime in the area, and surrounding cover types and management.

Harvest and regenerate aspen naturally, primarily through clearcutting. In stands where the objective is to develop or maintain mixed species, the preferred management strategy is "coppice with standards", which means to harvest aspen trees but retain individual oak, red pine, and white pine trees within a stand. This technique allows the remaining oak and pine trees to provide seed to the area and increases the diversity of the stand.

Harvest aspen, white birch, red maple and other short-lived species in the stand, leaving oak, red pine, white pine and individual trees of high value for wildlife, forest diversity, and aesthetics.

In aspen stands along flowages, stream borders, and road aesthetic strips, or as islands in wetlands, modify the standard management practices or apply no management to meet the management objectives for these areas.

NORTHERN PIN OAK (SCRUB OAK) DOMINATED MIXED FOREST

This is an early successional forest type that requires disturbance and abundant sunlight for regeneration. Management will typically include even-aged harvest practices of various shapes and sizes occurring at intervals of 45-60 year.

General Management Prescriptions

- When planning individual management actions, consider the ecological values and surrounding landscape of scrub oak's role on the Peshtigo River State Forest. A variety of age classes and stand sizes across the landscape provide wildlife and aesthetic value. Some considerations in landscape planning include age classes and patch sizes across the landscape, the natural disturbance regime in the area, and surrounding cover types and management.

- Harvest and regenerate scrub oak naturally, primarily through clear cutting, overstory removal when advanced regeneration is present, or shelterwood harvests on better quality sites or critical sites in aesthetic areas. Reserve trees may be left as individuals or in groups and can be any species. In this region, reserve trees are typically red pine, white pine, red maple and oak species that provide timber, aesthetics and wildlife value. Harvest area shape and size may vary with feathered edges or rough, irregular edges.

- Conversion to pine species, aspen or red maple will be made on suitable sites if the opportunity allows due to advanced regeneration, sprouting capabilities, or suitable seed sources. On some sites tree planting will occur to promote pine species. Conversion to white pine will facilitate succession while conversion to jack pine will reinitiate succession.

- In scrub oak stands along flowages, stream borders, and road aesthetic strips, modify the standard management practices or apply no management to meet the management objectives for these areas.

RED PINE DOMINATED FOREST PLANTATIONS

This forest type occurs throughout the forest in numerous plantation stands established 40 to 50 years ago by Wisconsin Public Service Corporation. Most of these stands have already been thinned once or twice for improved health and growth.

General Management Prescriptions

Several management activities will be used to manage red pine forests toward the future desired condition of larger and older trees with a diverse understory.

- Thin pine plantations on a recurring basis (8-20 year intervals), according to prescriptions outlined in the DNR Silviculture and Forest Aesthetics Handbook, to gradually create a structure similar to that of a naturally occurring pine stand. At biological maturity, 140-250 years, harvest red pine and replant or naturally regenerate.

- Plant red pine plantations as needed to maintain this species on the Forest. Hand or machine plant nursery stock seedlings following site preparation by mechanical and herbicide application. Use hand or herbicide release following planting to maintain growth and vigor of planted pine trees and increase survival of planted trees.

- Ground disturbance or prescribed fire may be used to promote natural regeneration of red pine where feasible and safe. Site conditions will be evaluated to determine if red, white or jack pine is best suited to a site. Conversion from red pine to white or jack pine will be done at the time of replanting to best match the site to the pine species.

RED OAK DOMINATED MIXED FOREST

Oak forests historically developed or regenerated following a significant disturbance such as a fire or blow down event. Much of the current red oak developed following the large scale cutover and wildfire era in the early 1900's. Red oak may be encouraged on sites with appropriate soil, slope and other conditions. This forest type has high value to a wide number of game and non-game wildlife species. Disturbance is required to regenerate existing stands and to maintain an oak component in mixed stands.

General Management Prescriptions

Use intermediate thinning practices to develop oak stands as they near biological maturity, and use shelterwood cuts to regenerate this species. Regenerate red oak at 90-150 years of age, depending on site characteristics. Other management techniques that may be applied to red oak stands include clear-cuts with reserves, scarification, hand-release, herbicide

treatments, and prescribed fire to promote regeneration. Red oak is typically regenerated through the shelterwood method. In a shelterwood harvest, about 30-40% of the mature trees are harvested, depending on site characteristics, to allow for sunlight and the regeneration of young oak trees. After the young oak trees have regenerated, about 10 to 15 years later, the majority of the mature trees are harvested, while maintaining 5 to 10 mature trees per acre for age and structural diversity and wildlife. A diverse stand is an important objective of regeneration.

On mixed stands of red oak with white pine, red maple or other species, promote long-lived tree species and their natural regeneration where possible.

WHITE PINE DOMINATED MIXED FOREST

White pine as a cover type currently makes up a very small percentage of the forest. However, short and long term objectives in all land management areas include converting some current cover types to white pine or increasing the white pine component of mixed stands. Even-age management practices will be used. To optimize vigor, white pine should be grown in full sunlight in a fully stocked condition. Pruning is essential for quality saw timber products as white pine does not self prune well.

General Management Prescriptions

Several management techniques will be used to manage white pine stands toward future desired conditions, increased white pine composition, and an older forest with longer lived species.

- Where white pine is the primary cover type, selectively thin to maintain the health, vigor and growth of the pines. Remove selected individuals or small groups to maintain species diversity and structural diversity. At biological maturity (150- 350 years) harvest pine and replant or naturally regenerate. Clearcutting, seed tree harvest and overstory release may be used depending on site conditions. Stand considerations, seed sources, and site prep needs will determine the appropriate management action to use.

- Where white pine is a viable understory component in mixed stands, use natural regeneration techniques such as seed tree and/or shelterwood regeneration methods. To promote pine to dominate the future stand give established seedlings adequate light for optimal growth. Reduce the overstory to no greater than twenty percent crown closure.

- Where a seed source exists and advance regeneration is inadequate or absent, patch clearcutting near the seed source can be done to establish a greater white pine component.

- Plant white pine plantations as needed to maintain pine on sites or to convert other forest types to pine. Hand or machine plant nursery stock seedlings following site preparation by mechanical and/or herbicide application. Use hand or herbicide release following planting to maintain growth and vigor and increase survival of planted trees.

- Ground disturbance or prescribed fire may be used to promote regeneration of white pine where feasible and safe.

- Thin pine plantations on a recurring basis (8-10 year intervals), according to prescriptions outlined in the DNR Silviculture and Forest Aesthetics Handbook, to gradually create a structure similar to that of a naturally appearing pine stand.

- Leave scattered large white pine in many harvest areas if they are healthy and do not pose a risk to humans or forest health.

JACK PINE DOMINATED FOREST

This is an early successional forest type that requires disturbance and full sunlight for regeneration. Historically, jack pine stands regenerated following fire or insect infestation events. Harvest and ground disturbance not only provide for good regeneration of jack pine but also support the development of a diverse mix of grasses, forbs and shrubs, which are important during successional stages of this forest community.

General Management Prescriptions

- On dry sites, clear-cut jack pine at biological maturity (50-80 years) and use appropriate means to regenerate the stand. Clear-cutting and planting, mechanical scarification or fire may be used. Currently planting is the most effective method for maximum survival of Jack pine because of the quality of the seedlings and an initial advantage over competing vegetation. Establish Jack pine plantations as necessary to maintain pine or to convert other forest types to Jack pine. Prepare the site using mechanical and herbicide treatment, then follow-up with hand or machine planting of nursery stock seedlings. Use hand or herbicide release following planting to maintain seedling growth, vigor, and survival rate.

- On mixed stands of jack pine, aspen and red maple, clear-cut harvest to regenerate a mixed stand or plant to jack pine.

RED MAPLE DOMINATED MIXED FOREST

Red maple is found on the forest on both dry and wet sites. It dominates some stands and is both a major and minor component of mixed stands. It is both a pioneer and sub-climax species that is more shade tolerant and longer lived than early successional species such as aspen and scrub oak.

General Management Prescriptions

- Even-aged management is the preferred silvicultural method to maintain red maple. Lower quality sites with fiber potential will be rotated and regenerated using coppice management. Higher quality sites with saw-log potential will be managed with either shelter wood or group selection regeneration techniques.

- Red maple saplings in stands with saw-log potential will be released to encourage accelerated diameter growth. Pole size stands will be commercially thinned. Poles and saplings on less rich sites do not warrant thinning or release.

- On mixed stands of scrub oak and red maple conversion to red maple will be considered by either allowing the scrub oak to "fall out" of the stand or by careful thinning of the oak component leaving red maple as residual.

- Where red maple is an associate in aspen stands, clear-cut harvest the red maple with aspen. Red maple can stump sprout from healthy cut trees and can seed in without scarification along with the aspen regeneration.

FORESTED AND UNFORESTED WETLANDS

The forested wetland areas typically contain stands of swamp conifer (black spruce, tamarack, white cedar and associated tree species). They can be pure stands of individual species or combinations of two or more tree species. Also included in this category are swamp hardwood stands. Examples of these are black ash, red maple and other species that occupy a wet forest environment. The unforested wetlands are represented by large areas of sphagnum muskeg and open bogs, as well as alder thickets and marshes.

General Management Prescriptions

- No management activities will be conducted within wetlands with small sized slow growing trees, lowland brush, or areas of open bog and marsh. However, access across these stands on frozen ground for temporary roads may be required.

- Productive stands of swamp hardwood, primarily black ash, may be regenerated by limited harvesting (create partial openings or use shelterwood cuts) following the guidelines in the DNR Silviculture and Forest Aesthetics Handbook.

- Productive stands of tamarack and black spruce may be regenerated by limited harvesting of stands (clear-cut) following the guidelines in the DNR Silviculture and Forest Aesthetics Handbook and in consultation with an integrated team of scientists.

- Conduct timber harvests on forested wetlands only under frozen ground conditions to prevent rutting and potential damage to organic soils.

LAND MANAGEMENT AREAS

The Peshtigo River State Forest has been divided into eight land management areas: three Forest Production Management Areas and five Native Community Management Areas. In addition to these land management areas, there are also two Overlay Zones. Each management area describes a unique landscape or management focus that considers soils, topography, community type, and other factors which shape the recommended management for each area. All of the management areas are shown on map 2.2.

Soils and habitat types are very similar on all three forest production sites; however, there are subtle management differences, such as what species will best be supported in each area. The Peshtigo River State Forest is comprised largely of species that tolerate the nutrient poor, well-drained sandy soils. Scrub oak and aspen are the most common species on much of the forest, but some higher quality oak stands occur on more mesic soils. Lowland areas on the forest are uncommon, but support cedar, spruce, and fir. Unique to this area are a number of rock outcroppings, bedrock glades, forested seeps, and the Peshtigo River, which lends a unique scenic quality to the forest.

LAND MANAGEMENT CLASSIFICATIONS AND AREAS

FOREST PRODUCTION MANAGEMENT AREAS		
Area 1	Peshtigo River Flowages	5,324 acre
Area 2	Fly Fishing Area	1,825 acres
Area 3	Potato Rapids Flowage	771 acres
NATIVE COMMUNITY MANAGEMENT AREAS		
*Area 4	Lake Lackawanna and Cedars	358 acres
Area 5	Caldron Falls	223 acres
Area 6	High Falls North	101 acres
*Area 7	Johnson Falls	206 acres
*Area 8	Kirby Lake Hardwoods	158 acres
OVERLAY ZONES		
	Shoreland Management	1,949 acres
	State Natural Areas	637 acres

**Includes a designated State Natural Area.*

The General Forest Management Prescriptions given earlier in this chapter outline the standard management practices to be used for each forest type (e.g. aspen, white/red pine, scrub oak, etc.). However, as the management objectives and needs vary from area to area, the individual area management prescriptions may be modified from the standard prescriptions.

Each Management Area has specific short and long-term objectives that articulate the future desired condition based on the ecological capabilities of the area and other factors. Because forests and landscapes change slowly, actions taken (or not taken) over the next 15 years may require 50-100 years to affect the forest as a whole.

Each Land Management area contains the following information:

- Overview and Summary of the area
- Description of the Forest Resource
- Soils and Habitat Types
- Map of each area
- Current and Projected Land Cover
- Short and Long Term Objectives
- Management Prescriptions

OVERLAY ZONES

An overlay zone is a planning tool that allows for additional management prescriptions that can span multiple management areas. It is most often used when there is a particular resource that requires additional prescriptions to meet the objectives of the zone. The objectives and management prescriptions for overlay zones are in addition to the objectives and management prescriptions for the underlying management area.

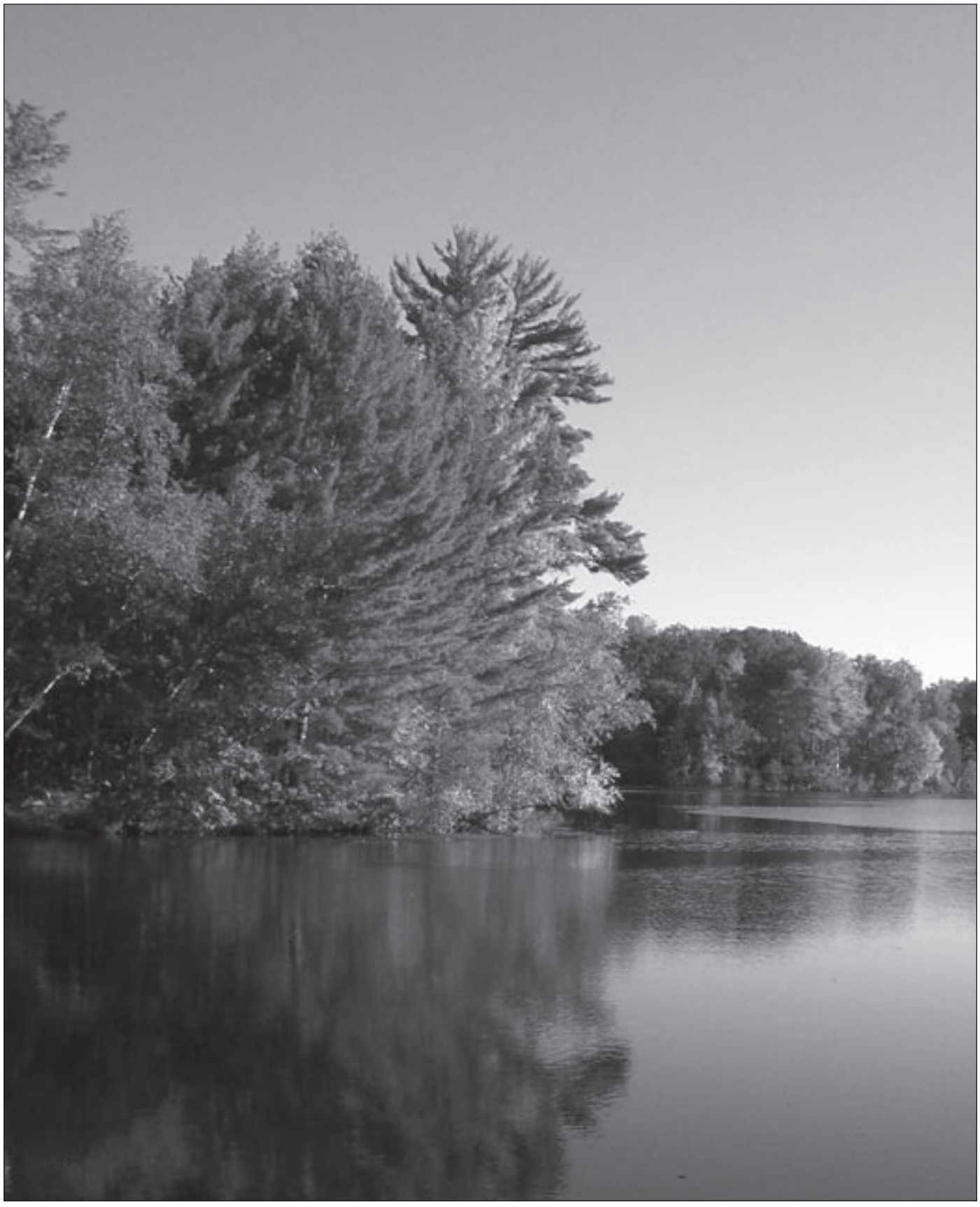
Shoreland Management Overlay Zone

The Peshtigo River State Forest has designated a Shoreland Management Overlay Zone as part of its licensing agreement with the Federal Energy Regulatory Commission (FERC) and the Wisconsin Public Service Corporation (WPSC). To assure licensing requirements are met, the Peshtigo River State Forest Master Plan designates a 200-foot Shoreland Management Overlay Zone along the river and flowage shorelines to protect and enhance the undeveloped scenic qualities of the river and flowages as well as the vegetation, wildlife, and fisheries of riparian areas. Public access to the Peshtigo River and flowages and associated recreational amenities will be maintained and enhanced (see Map 2.1).

State Natural Area Overlay Zone

Three State Natural Areas have been identified on the Peshtigo River State Forest; Lake Lackawanna and Cedars, Johnson Falls, and Kirby Lake Hardwoods (637 acres in total). State Natural Areas (SNAs) are part of a statewide system of sites identified for the purposes of ecological research, education, and to assure the full range of ecological diversity for future generations. SNAs are unique because they can serve as stand alone properties or they can be designated on other properties, such as state forests.

LAND MANAGEMENT AREAS



FOREST PRODUCTION MANAGEMENT AREAS

The general management objective of a forest production area is the sustainable production of forest products. However, forest production areas meet a wide range of ecological and recreation objectives. The specific objectives for any given management area may vary depending on site capability, forest types, and societal needs.

Sites with high recreational use or scenic value, or sites with special habitat needs are often inclusions within forest production areas. In these cases management practices are modified to be compatible with and support these multiple objectives.

FOREST PRODUCTION MANAGEMENT AREAS

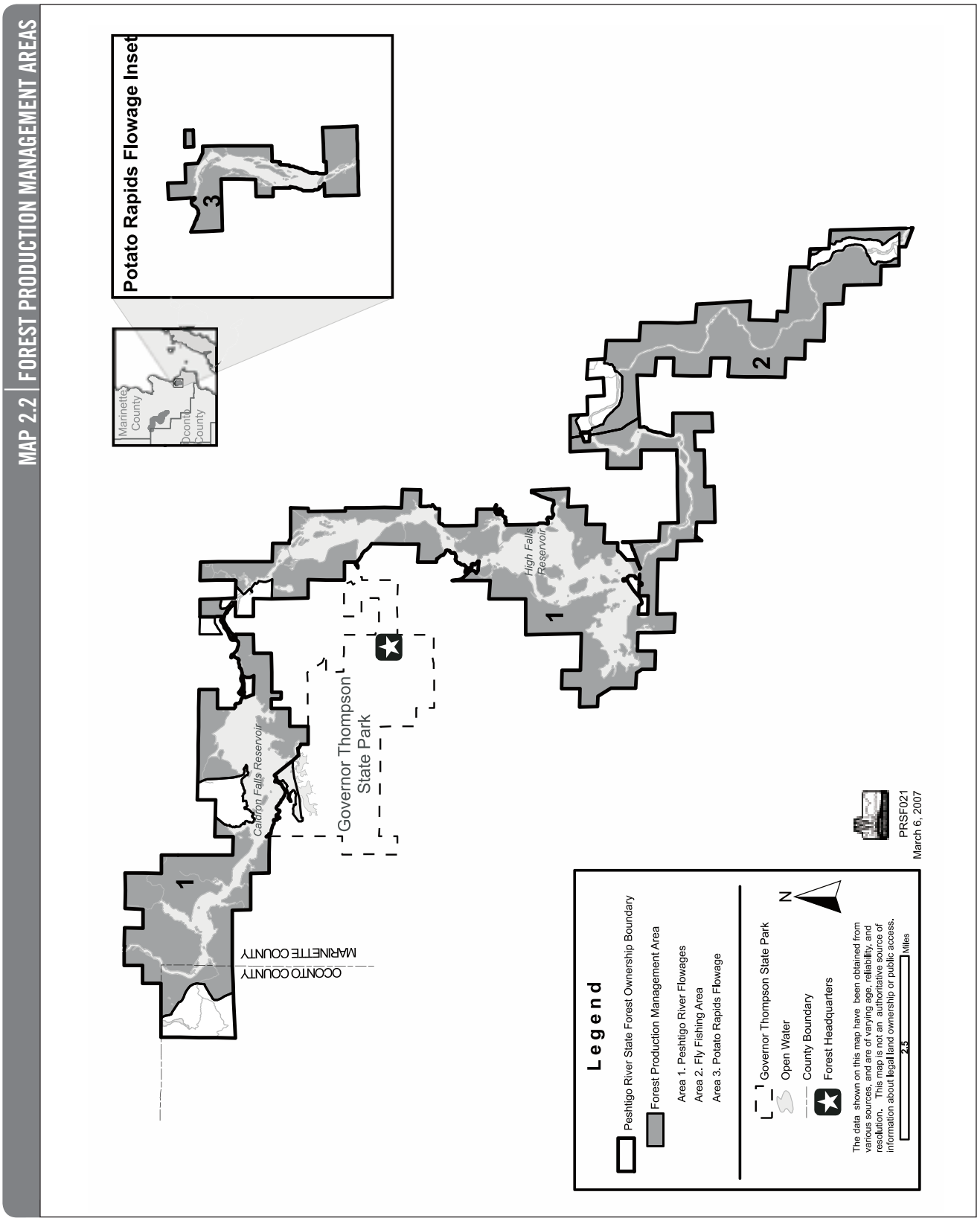
Area 1: Peshtigo River Flowages (5,324 acres)

Area 2: Fly Fishing Area (1,825 acres)

Area 3: Potato Rapids Flowage (771 acres)

TOTAL: 7,930 acres

FOREST PRODUCTION MANAGEMENT AREAS



AREA 1

FOREST PRODUCTION MANAGEMENT AREAS

PESHTIGO RIVER FLOWAGES

This area is comprised of 5,324 acres. It includes most of the land surrounding the flowages of the Peshtigo River from Boat Landing 12 at the northwest corner of the forest to the Johnson Falls Dam. The flowages in this area are Caldron Falls, High Falls, and Johnson Falls. This area is a relatively narrow strip of flat, dry, land surrounding the flowages, much of it near the water, public roads, recreational trails, or other recreational sites. Private land and seasonal residences are also adjacent to much of this area.

AREA 1 SUMMARY

- 5,324 acres.
- Opportunity to manage for longer lived species such as red and white pine.
- Opportunity to enhance the scenic qualities of the Peshtigo River and flowages.

Description of the Forest Resource

This area is comprised largely of forested uplands with a few lowland forests. Due to the low soil fertility and the tree species grown there, the forest is only moderately productive. In addition, the forest can also be described as old and monotypic due to the large acreages of over-mature scrub oak and aspen. Approximately 33% of the forest is scrub oak older than 70 years of age and 29% of the forest is aspen, which is more than 50 years old, both of which are past their rotation age. These large acreages of scrub oak and aspen also make this area highly susceptible to mortality initiated by gypsy moth defoliation.

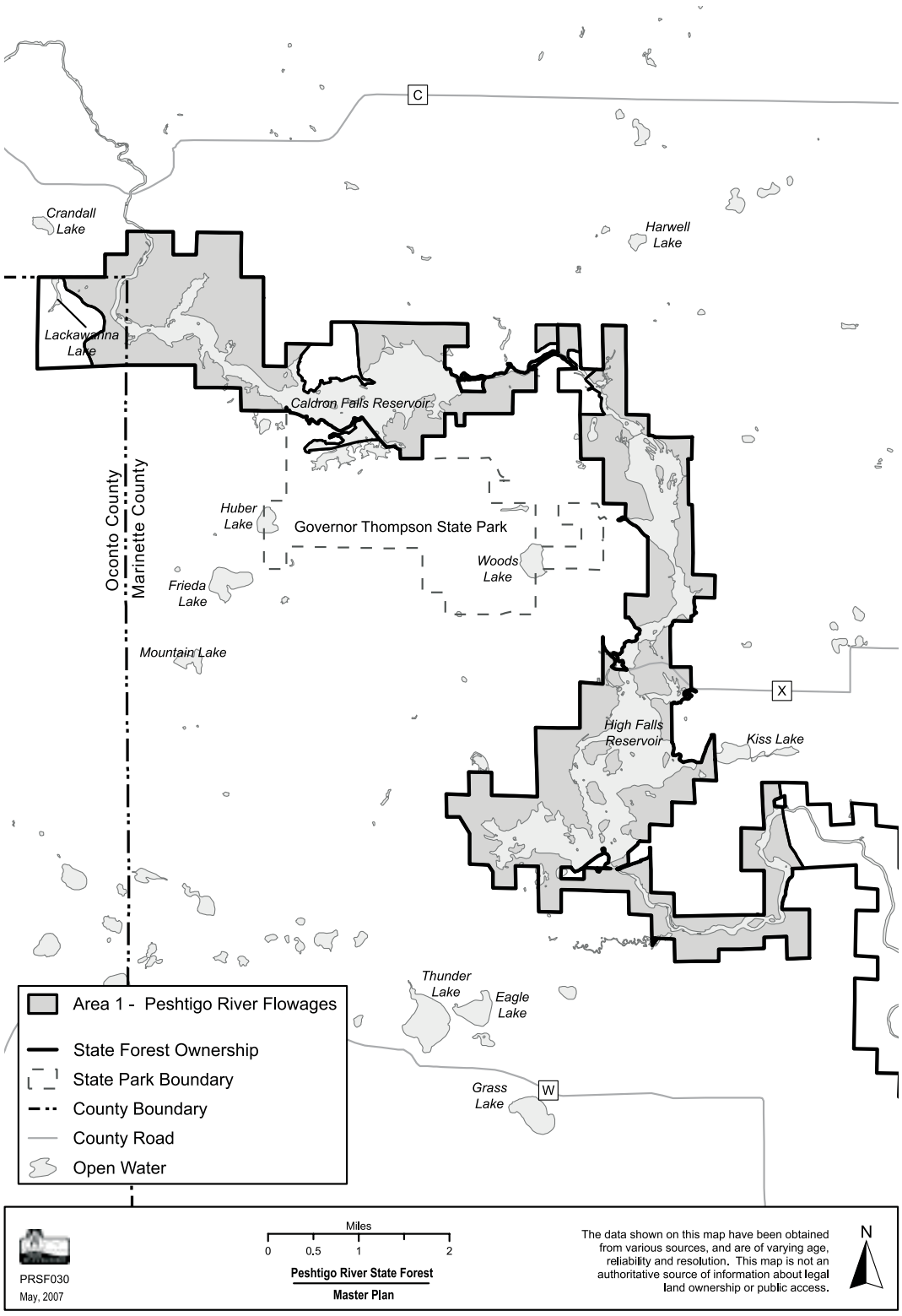
The conifer component of this area is small, and increasing it would increase forest productivity, wildlife habitat, and aesthetics. White pine is especially underrepresented in all size classes in this area, even as a secondary timber type. Despite this area being highly suitable for both red and jack pine, these species are also poorly represented. The jack pine acreage is less than 5%, and the red pine plantation acreage is only about 12%. These red pine plantations were established in the 1960's, are irregularly shaped, and contain a fair amount of scrub oak which contributes to the diversity of the stand and provides wildlife benefits.

Soils and Habitat Types

The soils in this area are primarily sands and loamy sands on the uplands, and poorly drained mineral or muck in the lowlands. The habitat types are closely tied to soil type and all are classified as low in soil moisture and poor to medium in soil nutrients. The three habitat types found in this area are PArVAo *(Pinus strobus-Acer rubrum/ Vaccinium angustifolium-Apocynum androsaemifolium),* PArVPo *(Pinus strobus-Acer rubrum/ Vaccimium angustifolium-Polygonatum pubescens),* and AVb *(Acer saccharum/ Viburnum acerifolium).*

PArVAo is the most nutrient deficient and driest habitat type found in this area. The dominant shrubs of this habitat type are blueberries, raspberries, sweet fern, hazel, and juneberry. The dominant ground flora is bracken fern, wild lily-of-the-valley, wintergreen, spreading dogbane, starflower and wild strawberry. The climax tree species are white pine and red maple.

MAP 2.3 PESHTIGO RIVER FLOWAGES



PArVPo is the most common habitat type in this area, with a dry-mesic moisture regime, and poor to medium soil nutrient gradient. Dominant shrubs include hazel, blackberry, blueberry, chokecherry, juneberry and bush honeysuckle. The dominant ground flora is bracken fern, wild lily-of-the-valley, whorled loosestrife, spreading dogbane, starflower, and hairy Solomon's seal. The climax tree species are white pine and red maple.

AVb is the richest habitat type found in this area, although it is still classified as having only moderate soil nutrients and dry-mesic soil moisture. This habitat type is most closely associated with red oak stands. The dominant shrubs are maple leaved viburnum, hazel, witch hazel, juneberry, blackberry, and bush honeysuckle. The dominant ground flora are bracken fern, large leaved aster, wild sarsaparilla, trillium, hog peanut, round lobed hepatica, false Solomon's seal, starflower, wood anemone, and wild lily-of-the-valley. Maintaining red oak is desirable and is complemented by its ability to compete well in this habitat type, preventing species such as red maple from taking over the more nutrient rich sites.

TABLE 2.1 PESHTIGO RIVER FLOWAGES CURRENT AND FUTURE LAND COVER

COMMUNITY TYPE	CURRENT		PREDICTED 50 YEAR	
	ACRES	% OF TOTAL AREA	ACRES	% OF TOTAL AREA
Scrub Oak	1,683	33%	532	10%
Aspen	1,563	29%	1,012	19%
Red Maple	262	5%	1,012	19%
Red Oak	183	3%	160	3%
Red Pine	674	13%	905	17%
Jack Pine	183	3%	426	8%
White Pine	61	1%	532	10%
Forested Wetlands	269	5%	266	5%
Unforested Wetlands	232	4%	266	5%
Unforested Uplands	214	4%	213	4%
Total	5,324	100%	5,324	100%

Long Term Management Objectives (100 years)

- Maintain a diversity of forest cover types and ages for overall health of the forest, aesthetic appeal, and to provide wildlife habitat.
- Protect and maintain the water quality and riparian habitat of the Peshtigo River and flowages.
- Continue to increase the abundance of white pine and larger, older trees in mixed stands.
- Maintain red pine and jack pine composition.
- Maintain the acreage of red oak and aspen.
- Maintain scrub oak and red maple except in areas suitable for conversion to white pine.
- Maintain the river corridor and flowages in an aesthetically pleasing condition.

Short Term Management Objectives (50 years)

- Enhance the diversity of forest cover types and age classes for overall health of the forest, aesthetic appeal, and to provide wildlife habitat.
- Protect and enhance the water quality and riparian habitat of the Peshtigo River and flowages.
- Maintain the current red oak acreage.
- Decrease scrub oak and increase the acreage and presence of white pine, aspen, red maple, red pine, or jack pine.
- Increase the presence and age of red and white pine on suitable sites across the area. Specifically, increase the acreage of stands that are dominated by pine and, in mixed stands where red and white pine are not the dominant species, increase the average pine component.
- In the Shoreland Management Overlay Zone, allow the natural conversion of aspen to white pine and red maple. Outside of the Shoreland Management Area maintain aspen approximately at current levels.
- Maintain the river corridor and flowages in an aesthetically pleasing condition.

Resource Management Prescriptions

Please see the General Management Prescriptions at the beginning of this section for general management prescriptions by forest type. The General Management Prescriptions apply and all management activities are authorized, except as noted below for this management area.

- Minimize the visual impact of management along the river corridor and flowages using aesthetic management techniques for timber harvests such as restricting the size of cuts, conducting partial harvests, retaining large longer lived tree species, planting trees, managing for longer lived species, and harvesting during the winter.

- On suitable sites, allow scrub oak to naturally convert to white pine, aspen, or red maple. Where natural conversion is not viable or where conversion to red pine or jack pine is desired, use planting and other active management techniques.

- Where feasible, use natural conversion to increase the presence of white pine across the management area. In mixed stands, promote the growth and retention of large white pine trees.

- Retain snags and coarse woody habitat whenever their retention does not conflict with other forest management objectives, including riparian areas.

AREA 2 FOREST PRODUCTION MANAGEMENT AREA

FLY FISHING AREA

The Fly Fishing Forest Production Management Area is comprised of 1,825 acres. This area includes all land downstream from the Johnson Falls Dam to the end of Spring Rapids, excluding Johnson Falls, and Kirby Lake Hardwoods Native Community Management Areas. Johnson Falls Road is the northwest boundary. This area is the only significant stretch of free flowing river on the Peshtigo River State Forest. Upstream, the flow of the river is regulated by dams and is maintained to imitate the natural fluctuations of the river, maintaining a relatively stable environment for aquatic species. The steep slopes of this valley are a sharp contrast to the flat topography found on much of the rest of the forest. Harvest in this area will be limited due to steep slopes, visual impact, and the Shoreland Management Overlay Zone.

AREA 2 SUMMARY

- 1,825 acres.
- Includes the entire corridor of the free flowing river.
- Approximately 150 acres comprised of slopes too steep to harvest.
- Opportunity to promote and enhance the naturally appearing and undeveloped scenic qualities of the Peshtigo River.
- Opportunity to increase longer lived trees such as red and white pine.

Description of the Forest Resource

The three most common timber types in this area are aspen (21%), oak (primarily scrub oak) (61%), and red pine (13%). Other timber types such as red maple, fir/spruce, cedar, and swamp conifer are found here, but are not nearly as common.

The aspen stands are of mixed ages due to favorable pulp markets over the past 30 years which have encouraged periodic harvests as stands became merchantable. However, there are also large stands of over mature aspen that were not harvested and are in decline. Unlike the favorable aspen pulp markets of the past 30 years, the oak pulpwood market has been poor and much of the oak has not been harvested resulting in large stands of over mature and declining oak. These stands are 70-80 years old and well past the rotation ages for both species. A few high quality red oak stands can be found in the southeast portion of the Fly Fishing Area, representing some of the best red oak stands in the Forest.

This area also includes some red pine plantations that were established in the 1960's. They are irregularly shaped and contain a fair amount of oak, which contributes to the diversity of the stand and provides wildlife benefits. Most of these plantations are on the west side of the river.

Soils and Habitat Types

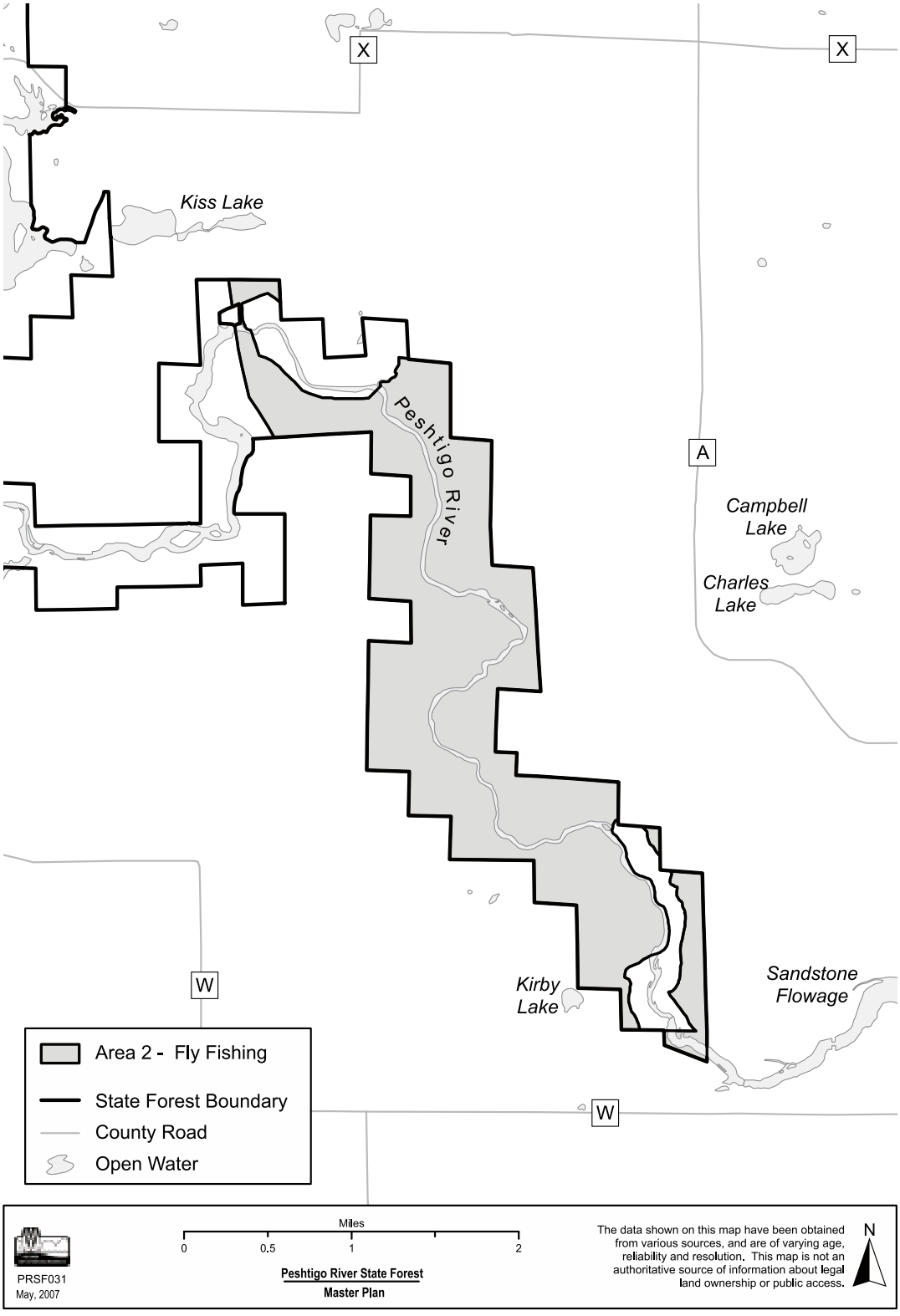
The soils in this area are primarily sands and loamy sands on the uplands and poorly drained mineral or muck in the lowlands. The habitat types are closely tied to soil type and all are classified as low in soil moisture and poor to medium in soil nutrients. The three habitat types found in this area are PArVAo (*Pinus strobus-Acer rubrum/Vaccinium angustifolium-Apocynum androsaemifolium),* PArVPo *(Pinus strobus-Acer rubrum/ Vaccimium angustifolium-Polygonatum pubescens),* and AVb *(Acer saccharum/Viburnum acerifolium).*

PArVAo is the most nutrient deficient and driest habitat type found in this area. The dominant shrubs are blueberries, raspberries, sweet fern, hazel, and juneberry. The dominant ground flora is bracken fern, wild lily-of-the-valley, wintergreen, spreading dogbane, starflower and wild strawberry. The climax tree species are white pine and red maple.

PArVPo is the most common habitat type in this area, with a dry-mesic moisture regime, and poor to medium soil nutrient gradient. Dominant shrubs include hazel, blackberry, blueberry, chokecherry, juneberry and bush honeysuckle. The dominant ground flora is bracken fern, wild lily-of-the-valley, whorled loosestrife, spreading dogbane, starflower, and hairy Solomon's seal. The climax tree species are white pine and red maple.

AVb is the richest habitat type found in this area, although it is still classified as having only moderate soil nutrients and dry-mesic soil moisture. This habitat type is most closely associated with red oak stands. The dominant shrubs are maple leaved viburnum, hazel, witch hazel, juneberry, blackberry, and bush honeysuckle. The dominant ground flora are bracken fern, large leaved aster, wild sarsaparilla, trillium, hog peanut, round lobed hepatica, false Solomon's seal, starflower, wood anemone, and wild lily-of-the-valley. Maintaining red oak is desirable and is complemented by its ability to compete well in this habitat type, preventing species such as red maple from taking over the more nutrient rich sites.

MAP 2.4 FLY FISHING AREA



AREA 2 FOREST PRODUCTION MANAGEMENT AREA

FLY FISHING AREA

Long Term Management Objectives (100 years)

- Maintain the high scenic qualities of the Peshtigo River and flowages.
- Protect the water quality and riparian habitat of the Peshtigo River and flowages.
- Maintain a diversity of forest cover types and age classes for overall health of the forest, aesthetic appeal, and to provide wildlife habitat.
- Continue to increase the presence of large, longer lived trees such as white pine on suitable sites.
- Maintain scrub oak and red maple for habitat diversity.
- Maintain red oak, aspen, jack pine, and red pine acreages.

Short Term Objectives (50 years)

- Maintain and enhance the scenic qualities of the Peshtigo River and flowages.
- Enhance the diversity of forest cover types and age classes for overall health of the forest, aesthetic appeal, and to provide wildlife habitat.
- Protect and enhance the water quality and riparian habitat of the Peshtigo River and flowages.
- Decrease the acreage of scrub oak but maintain a component for habitat diversity.
- Increase the presence of longer-lived trees such as red and white pine.
- Increase the total acreage of jack pine and red maple.
- Maintain current levels of red oak and aspen.

Resource Management Prescriptions

Please see the General Management Prescriptions at the beginning of this section for general management prescriptions by forest type. The General Management Prescriptions apply and all management activities are authorized, except as noted below for this management area.

- When conducting forest management activities, modify the standard management prescriptions to minimize as practicable, the visibility of activities from the river. Specific aesthetic management techniques that may be used are: restricting the size of cuts, conducting partial harvests, retaining single trees or groups of trees, creating irregular or feathered harvest boundaries, controlling logging slash, planting trees, managing for longer lived species, and harvesting during the winter.
- Manage for longer-lived trees such as red and white pine across the management area on suitable sites.
- Where feasible, allow scrub oak to naturally convert to white pine, aspen, or red maple. Where natural conversion is not viable or where conversion to red pine or jack pine is desired, use planting and other active management techniques. (The decision to convert to red pine or jack pine from scrub oak is influenced by a variety of factors including but not limited to: site suitability, visibility, deer browse and competition from the current cover-type after harvest.)
- On areas that are to steep for forest management use passive management, except for the control of invasive species. Determine steep slopes on a stand by stand basis whenever forest management activities are proposed.
- Retain snags and coarse woody habitat across the area and downed trees in the river.

TABLE 2.2 FLY FISHING AREA CURRENT AND FUTURE LAND COVER

COMMUNITY TYPE	CURRENT		PREDICTED 50 YEAR	
	ACRES	% OF TOTAL AREA	ACRES	% OF TOTAL AREA
Aspen	378	21%	378	22%
Fir-Spruce	17	1%	100	5%
Red Oak	06	11%	206	11%
Red Pine	46	13%	321	19%
Right of Way	26	1%	26	1%
Scrub Oak	897	50%	281	15%
White Birch	55	3%	0	0%
White Pine	0	0%	134	7%
Red Maple	0	0%	300	16%
Jack Pine	0	0%	79	4%
Total	1,825	100%	1,825	100%

AREA 3 FOREST PRODUCTION MANAGEMENT AREA

POTATO RAPIDS FLOWAGE

This area is made up of 771 acres of land. It is located outside the main forest boundary near the cities of Marinette and Peshtigo. Much of the area is near the water, public roads, recreational trails, or other recreational sites. Additionally, much of this area is adjacent to private land and seasonal residences.

Description of the Forest Resource

Due to the nutrient poor sandy soils found in this area, the forest is generally poorly productive. Seven percent of the acreage is planted red pine, which is highly productive compared to the scrub oak, which is about 19% of the acreage. The forest resource is somewhat monotypic due to the high percentage (43%) of sapling sized aspen. The high percentage of aspen makes this area susceptible to gypsy moth defoliation, which decreases vigor and growth of the aspen and contributes to the death of scrub oak.

The conifer component of this area is small. The white pine and jack pine acreage is almost non-existent, even as a secondary timber type. Increasing the conifer component would be desirable from the forest productivity standpoint, and for the wildlife and aesthetic benefits of conifers. There are some residual red pine plantations in this area that were established in the 1960's which are irregularly shaped and contain a fair amount of oak, which contributes to the diversity of the stand and provides wildlife benefits.

Soils and Habitat Types

The soils in this area are primarily sands and loamy sands on the uplands, and poorly drained mineral or muck in the lowlands. The habitat types are closely tied to soil type and all are classified as low in soil moisture and poor to medium in soil nutrients. The three habitat types found in this area are PArVAo *(Pinus strobus-Acer rubrum/ Vaccinium angustifolium-Apocynum androsaemifolium),* PArVPo *(Pinus strobus-Acer rubrum/ Vaccimium angustifolium-Polygonatum pubescens),* and AVb *(Acer saccharum/ Viburnum acerifolium).*

PArVAo is the most nutrient deficient and driest habitat type found in this area. The dominant shrubs of this habitat type are blueberries, raspberries, sweet fern, hazel, and juneberry. The dominant ground flora is bracken fern, wild lily-of-the-valley, wintergreen, spreading dogbane, starflower and wild strawberry. The climax tree species are white pine and red maple.

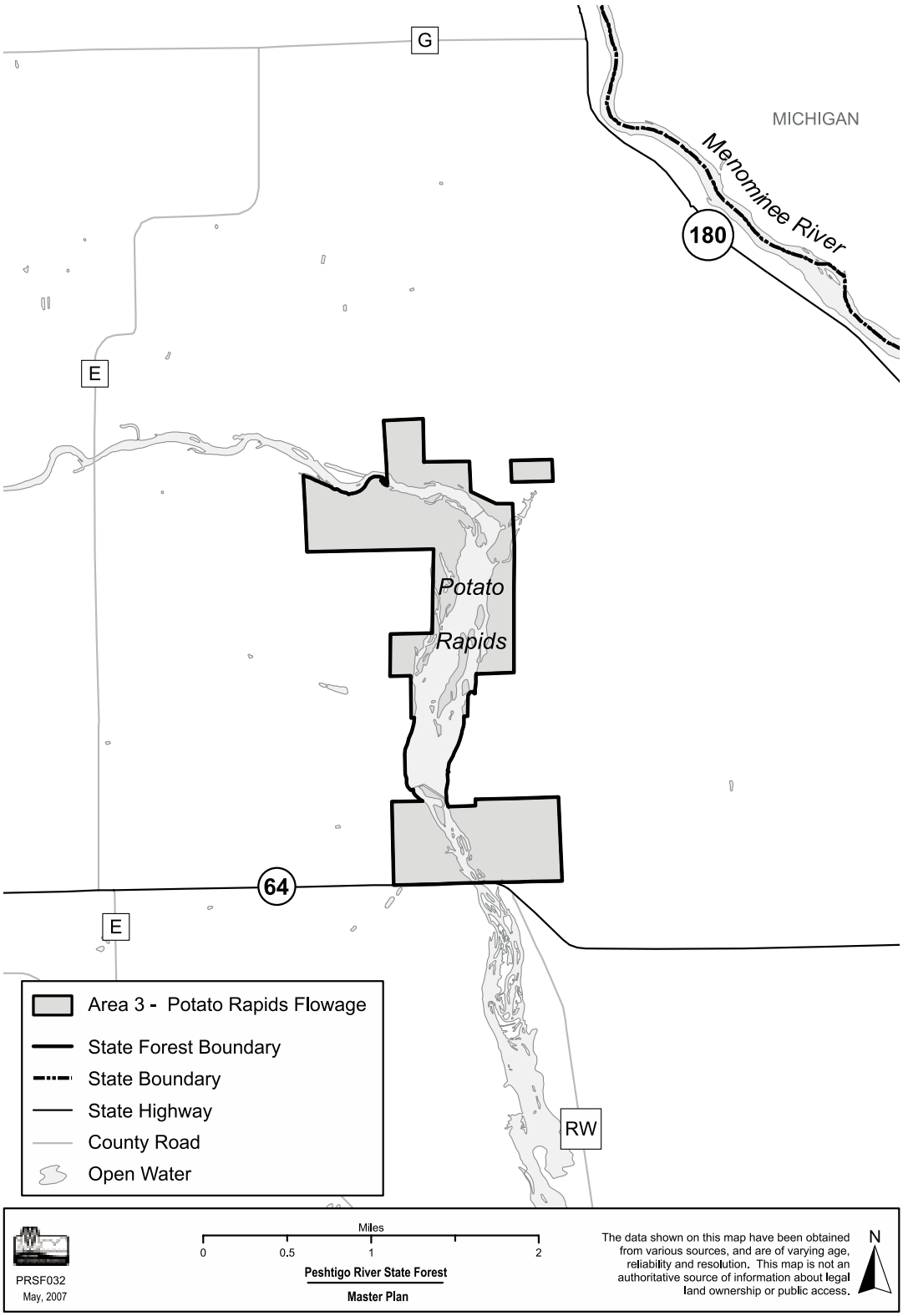
PArVPo is the most common habitat type in this area, with a dry-mesic moisture regime, and poor to medium soil nutrient gradient. Dominant shrubs include hazel, blackberry, blueberry, chokecherry, juneberry and bush honeysuckle. The dominant ground flora is bracken fern, wild lily-of-the-valley, whorled loosestrife, spreading dogbane, starflower, and hairy Solomon's seal. The climax tree species are white pine and red maple.

AREA 3 SUMMARY

- 771 acres
- Located outside the primary forest boundary near the cities of Marinette and Peshtigo
- Opportunity to manage for longer lived tree species such as white pine.

AVb is the richest habitat type found here, although it is still classified as having only moderate soil nutrients and dry-mesic soil moisture. This habitat type is most closely associated with red oak stands. The dominant shrubs on this habitat type are maple leaved viburnum, hazel, witch hazel, juneberry, blackberry, and bush honeysuckle. The dominant ground flora are bracken fern, large-leaved aster, wild sarsaparilla, trillium, hog peanut, round-lobed hepatica, false Solomon's seal, starflower, wood anemone, and wild lily-of-the-valley. Maintaining red oak is desirable and is complemented by its ability to compete well in this habitat type, preventing species such as red maple from taking over the more nutrient rich sites.

MAP 2.5 POTATO RAPIDS FLOWAGE



AREA 3 FOREST PRODUCTION MANAGEMENT AREA

POTATO RAPIDS FLOWAGE

Long Term Management Objectives (100 years)

- Maintain the scenic qualities of the Peshtigo River and flowage.
- Protect and maintain the water quality and riparian habitat of the Peshtigo River and flowage.
- Maintain a diversity of forest cover types and age classes for overall health of the forest, aesthetic appeal, and to provide wildlife habitat.
- Continue to increase the level of white pine and maintain the abundance of red pine. Promote larger diameter trees for both species.
- Maintain scrub oak, aspen, and red maple.

Short Term Management Objectives (50 years)

- Maintain and enhance the scenic qualities of the Peshtigo River and flowage.
- Protect and enhance the water quality and riparian habitat of the Peshtigo River and flowages.
- Reduce the acreage of aspen and scrub oak and increase the presence of white pine, red maple, and other species and maintain the current acreage of red pine.

TABLE 2.3 POTATO RAPIDS FLOWAGE CURRENT AND FUTURE LAND COVER

COMMUNITY TYPE	CURRENT		PREDICTED 50 YEAR	
	ACRES	% OF TOTAL AREA	ACRES	% OF TOTAL AREA
Scrub Oak	146	19%	46	6%
Aspen	327	43%	218	28%
Red Maple	104	13%	236	31%
Red Pine	57	7%	57	7%
White Pine	0	0%	77	10%
Forested Wetlands	35	5%	35	5%
Unforested Wetlands	72	9%	72	9%
Unforested Uplands	30	4%	30	4%
Total	771	100%	771	100%

Resource Management Prescriptions

Please see the General Management Prescriptions at the beginning of this section for general management prescriptions by forest type. The General Management Prescriptions apply and all management activities are authorized, except as noted below for this management area.

- Allow the natural conversion of aspen and scrub oak to white pine, red maple, and other species within the Shoreland Management Overlay Zone.
- Use natural conversion to increase the presence of red maple and white pine in mixed stands across the management area. Actively convert some deciduous forest types to white pine on appropriate sites. Manage white pine towards larger diameter older trees.
- Retain snags and coarse woody habitat whenever their retention does not conflict with other forest management objectives, including riparian areas.
- Minimize the visual impact of timber harvests using aesthetic management techniques such as restricting the size of cuts, conducting partial harvests, retaining single trees or groups of trees, creating irregular or feathered harvest boundaries, controlling logging slash, planting trees, managing for longer lived species, and harvesting during the winter.

POTATO RAPIDS FLOWAGE

NATIVE COMMUNITY MANAGEMENT AREAS

Native community areas are managed with the primary objective of representing and perpetuating native plant communities whether upland, wetland or aquatic, and other aspects of native biological diversity. Management activities are designed to achieve land management objectives through natural processes whenever possible.

Native community areas will be managed to provide the full range of native plant and animal communities found on the Peshtigo River State Forest. Only those areas of highest value for protection or community restoration were selected. Whenever possible, management activities in native community management areas achieve their objectives through natural processes (passive management) and active management techniques that mimic natural processes.

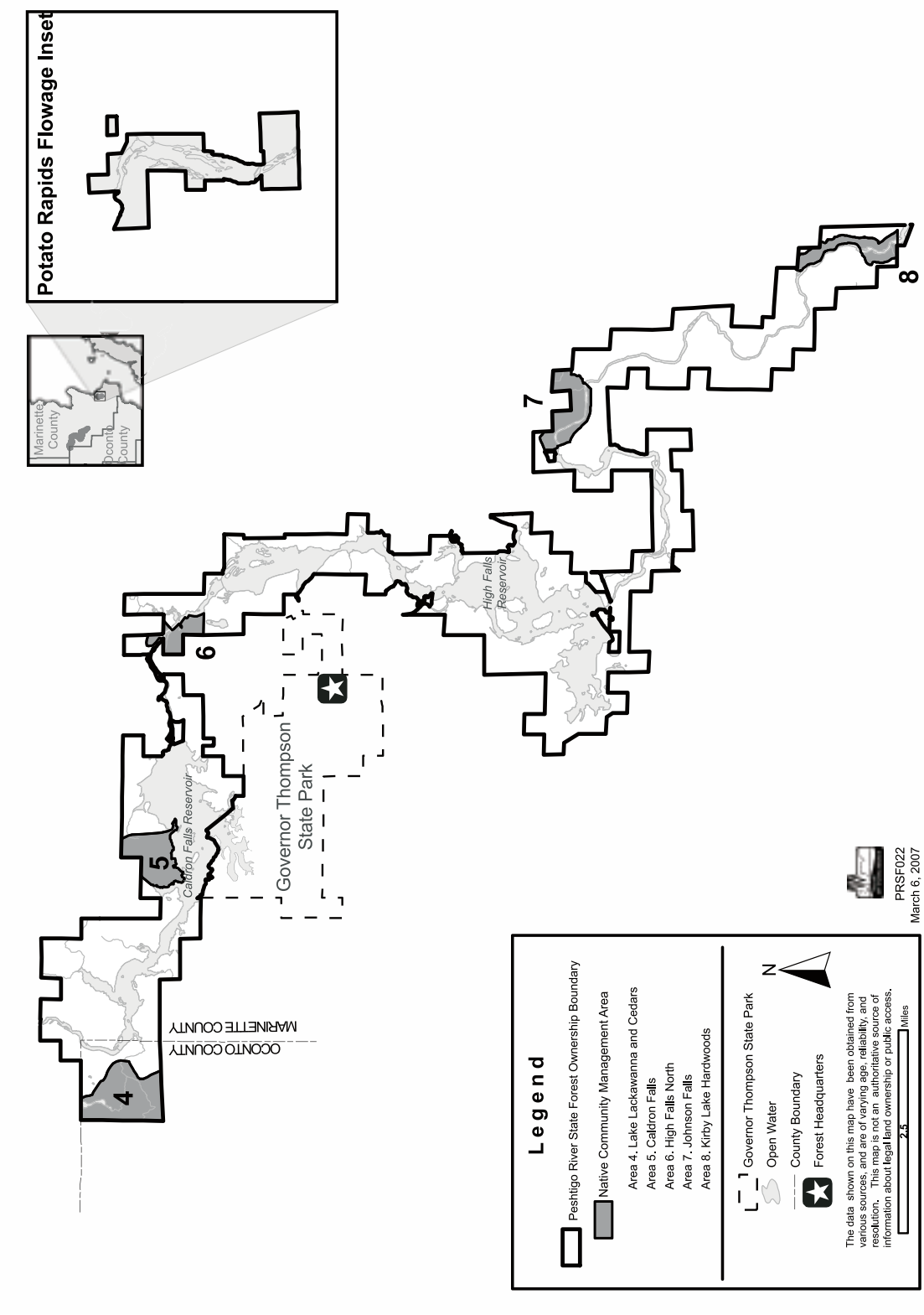
NATIVE COMMUNITY MANAGEMENT AREAS

Area 4: Lake Lackawanna and Cedars (358 acres)
Area 5: Caldron Falls (223 acres)
Area 6: High Falls North (101 acres)
Area 7: Johnson Falls (206 acres)
Area 8: Kirby Lake Hardwoods (158 acres)

Management Objectives

- Restore and maintain native plant and animal communities and other aspects of native biological diversity.
- Maintain a mosaic of rare or representative community types that include older closed canopy forests of longer lived species such as pines (on the uplands) and northern white cedar (on the lowlands), as well as an undeveloped lake and other unique attributes including Forested Seeps and Bedrock Glades.
- Maintain a diversity of forested and unforested wetlands where suitable.
- Maintain, protect and enhance water quality, including coarse woody habitat.
- Protect rare species habitats and high-quality natural communities.
- Provide for research, education and ecological interpretation.

MAP 2.6 | NATIVE COMMUNITY MANAGEMENT AREAS



AREA 4 NATIVE COMMUNITY MANAGEMENT AREA

LAKE LACKAWANNA AND CEDARS

This 358 acre Native Community Management Area is comprised of a diverse mosaic of upland and wetland community types. The site features a small hard water drainage lake surrounded by several wetland types and an associated stream, as well as an extensive Northern Wet-mesic Forest dominated by 100 (+) year-old white cedar. Though the lake is entirely state owned, the main inlet passes through private land from Crandall Lake to the north. Two plants of Special Concern have been documented at this site in both wet and dry habitats.

Description of the Forest Resource

The uplands are dominated largely by immature aspen, along with patches of Hill's oak-dominated Northern Dry Forest. Several community types make up the lowlands, including Tamarack Swamp, Northern Hardwood Swamp, Alder Thicket, Southern Sedge Meadow, and, most notably, the large cedar swamp (Northern Wet-mesic Forest). The site also contains scattered red pine plantations in patches less than 5 acres each. Scattered patches of mature, declining white spruce are common along old logging trails created in the 1970's in the southern half of the area.

The cedar swamps are located in two main areas—one just south of the lake, and the other along the southern boundary of the site and extending southward onto federal land. The immature aspen in the uplands originated from harvest cuts made in the 1970's and late 1990's. White pine regeneration, in the form of seedlings and saplings, is an important feature of the site's uplands. Two small streams traverse the southern half of the area. One stream is the outlet of Lake Lackawanna, and the other stream flows from federal land to the west, joining the outlet.

TABLE 2.4 LAKE LACKAWANNA AND CEDARS CURRENT AND FUTURE LAND COVER

COMMUNITY TYPE	CURRENT		PREDICTED 50 YEAR	
	ACRES	% OF TOTAL AREA	ACRES	% OF TOTAL AREA
White Pine	10	3%	52	15%
Cedar	60	17%	60	17%
Swamp Conifer	46	13%	46	13%
Swamp Hardwood	30	8%	30	8%
Red Pine	10	3%	10	3%
Aspen	122	34%	80	22%
Scrub Oak	10	3%	10	3%
Fir/Spruce	30	8%	30	8%
Lake	10	3%	10	3%
Emergent Vegetation	20	5%	20	5%
Lowland Brush	10	3%	10	3%
Total	358	100%	358	100%

AREA 4 SUMMARY

- This area is approximately 358 acres in size with 100% of it in state ownership.
- Opportunity to develop an older, dry-mesic closed canopy forest of longer lived species like white pine on the uplands while maintaining the diverse wetland community, including northern white cedar, on the lowlands.
- Protect and enhance rare species habitats, natural communities, and water quality.
- Designated State Natural Area.

Soils and Habitat Types

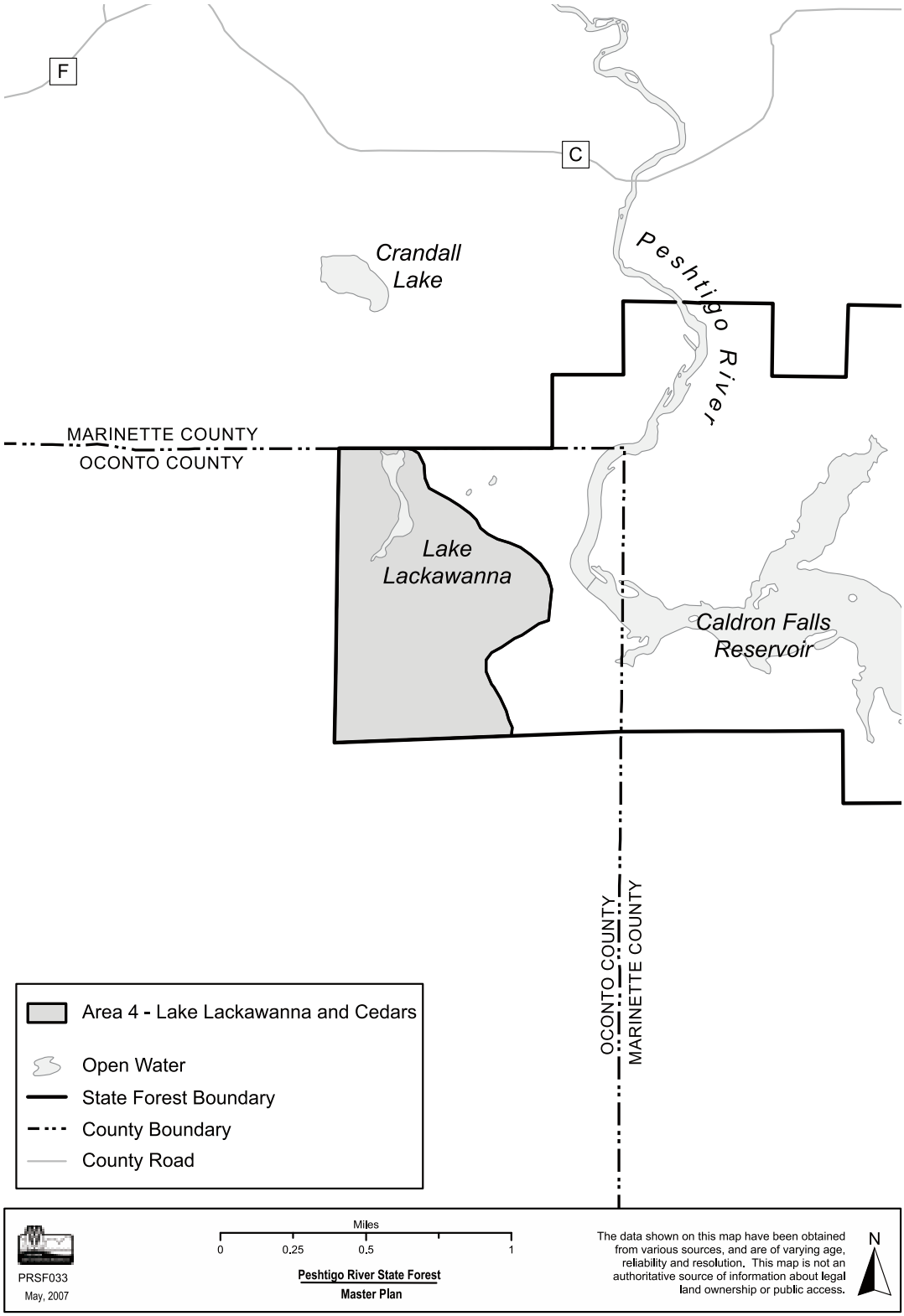
Upland soils in this area are predominately sands and loamy sands, while the lowlands are primarily muck. The uplands have a dry-mesic moisture regime, and a poor to medium soil nutrient regime, typical of the PArVPo forest habitat type. The dominant shrubs on this habitat type are hazel, blackberry, blueberry, chokecherry, juneberry, and bush honeysuckle. The dominant ground flora is bracken fern, wild lily-of-the valley, whorled loosestrife, spreading dogbane, starflower, and hairy Solomon's seal.

State Natural Area Designation

The State Natural Area Designation for Lake Lackawanna and Cedars State Natural Area includes a passively managed zone encompassing the forested and open wetlands and an active management zone that will promote development of old white and red pine forest.

Lake Lackawanna is a shallow hard water drainage lake with a maximum depth of 3 feet. The cedar swamp is second-growth, although little disturbance has occurred for nearly a century. The wetlands harbor populations of rare plants and animals. The remainder of the 358-acre site is younger upland forest that will be actively managed to promote older white and red pine.

MAP 2.7 | LAKE LACKAWANNA AND CEDARS



Short and Long Term
Management Objectives (50 &100 Years)

- Protect the hydrology and water quality of Lake Lackawanna and associated streams.
- Maintain a diverse mosaic of native community types.
- Develop and maintain the uplands in older closed canopy forest that: 1) have large diameter trees, 2) are structurally diverse, 3) have a mixed species composition with an increased dominance by longer lived species such as white pine, and 4) contain old growth characteristics such as the development of abundant coarse woody debris and standing dead snags.
- Convert red pine plantations to a diverse forest that includes white pine as a major associate.
- Maintain the existing native wetland community types such as Sedge Meadow and Alder Thicket. The forested wetlands will be dominated by Northern wet-mesic Forest (Northern White Cedar swamp), but are expected to have inclusions of other types such as Tamarack Swamp and Northern Hardwood Swamp.
- Protect and enhance rare species habitats (two rare plants at the time of this writing) and high quality natural communities.
- Provide opportunities for scientific research.
- Provide recreation opportunities that generally focus on activities such as hiking, bird-watching, photography, and nature study.

Resource Management Prescriptions
The General Forest Management Prescriptions apply and all of their associated management activities apply, except as limited by the prescriptions below:

- Maintain the hydrology, aesthetic values, and water quality of the lake, wetlands, and associated streams by using Best Management Practices (BMPs).
- Actively manage the uplands to favor increased dominance by longer-lived trees such as white pine, primarily through thinning and natural conversion, while maintaining and enhancing forest structure and tree species diversity. Coordinate with the State Natural Areas program to plan active management techniques and strategies. The DNR Old Growth Handbook should be used to help guide this work, particularly information related to "Managed Old-growth" forests.
- Retain numerous standing dead snags and coarse woody habitat in both upland and riparian areas.
- Use monitoring information on changes in composition and structure to aid in future management decisions.
- Actively manage red pine plantations primarily through thinning and natural regeneration techniques to create stands with a natural appearance and large diameter trees grown to biological maturity.
- Passively manage all of the wetland communities, including the forested lowlands.
- Actively control beaver populations and mitigate the impacts of beaver damage if they threaten to negatively affect the cedar swamp(s) for the purposes of protecting rare species habitats and maintaining high-quality natural communities
- Salvage generally will not occur in passive areas unless necessary to meet statutory responsibilities for fire protection or pest control. In actively managed areas, salvage of trees damaged by wind, ice, fire, and insects, may occur after consultation with managers from affected DNR programs to determine how salvage can be done to help meet the objectives of the area.
- Control of invasive plants may also occur in passively managed areas.

AREA 5

NATIVE COMMUNITY MANAGEMENT AREA

CALDRON FALLS

This 223 acre Native Community Management Area is located along the north shore of the Caldron Falls Reservoir and features a large block of Northern Dry-mesic Forest surrounding two shallow peaty depressions containing good quality Black Spruce Swamp. There is at least one Ephemeral Pond, a rare feature in the landscape, located within the site. This area represents one of the best opportunities on the Peshtigo River State Forest and surrounding landscape to manage for a larger, contiguous block of intact Northern Dry-mesic Forest, which could benefit numerous species. The Black Spruce Swamps have good plant diversity that is representative of this type.

AREA 5 SUMMARY

- 223 acres in state ownership.
- Opportunity to maintain a forest mosaic with large, old trees representing later forest successional stages with high-quality wetland inclusions.
- Opportunity to manage for longer-lived species.

Description of the Resource

This native community is entirely within Peshtigo River State Forest ownership. However, acquiring adjacent private lands would be highly beneficial in creating a large block of closed canopy forest. An important feature of this entire land management area is abundant conifer regeneration, which consists of black spruce in the black spruce depressions, and white pine on both the uplands and portions of the lowlands. The black spruce stands in the lowlands appear to be self-regenerating while the uplands are naturally succeeding to white pine as the habitat type predicts.

Soils and Habitat Types

The primary habitat type for the uplands of this area is PArVPo, which has a dry-mesic moisture regime, and a poor to medium soil nutrient regime. Upland soils are predominantly sands and loamy sands. The area falls into the broad classification of a Northern Dry-Mesic Forest. The dominant shrubs on this habitat type are hazel, blackberry, blueberry, chokecherry, juneberry, and bush honeysuckle. The dominant ground flora are bracken fern, wild lily-of-the-valley, whorled loosestrife, spreading dogbane, starflower, and hairy Solomon's seal.

MAP 2.8 CALDRON FALLS

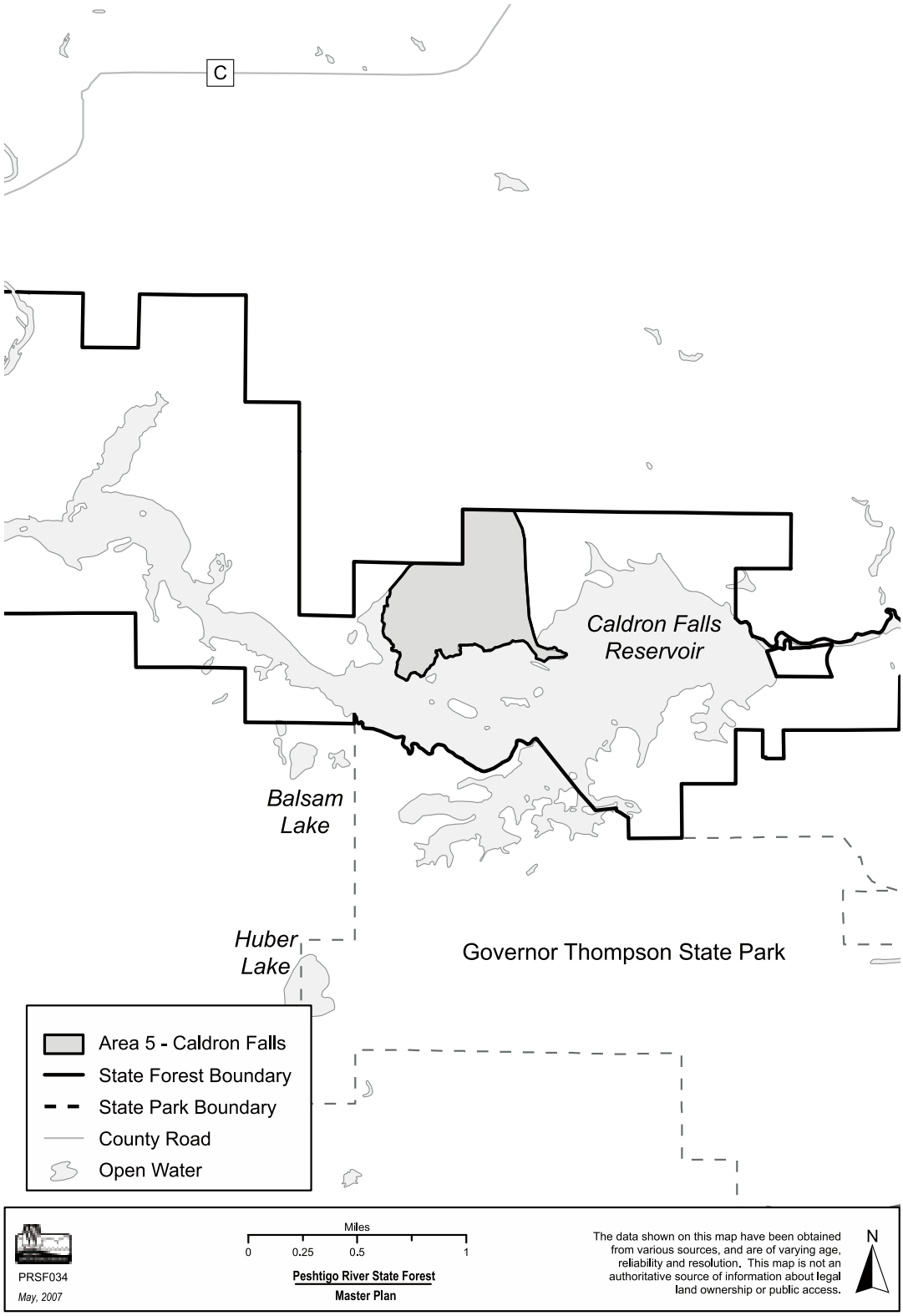


TABLE 2.5 CALDRON FALLS CURRENT AND FUTURE LAND COVER

COMMUNITY TYPE	CURRENT		PREDICTED 50 YEAR	
	ACRES	% OF TOTAL AREA	ACRES	% OF TOTAL AREA
Black Spruce	25	11%	25	11%
Red Pine	20	9%	20	9%
Red Maple	48	21%	28	12%
Aspen	53	24%	28	12%
Scrub Oak	77	35%	19	8%
White Pine	0	0 %	103	48%
Total	223	100%	223	100%

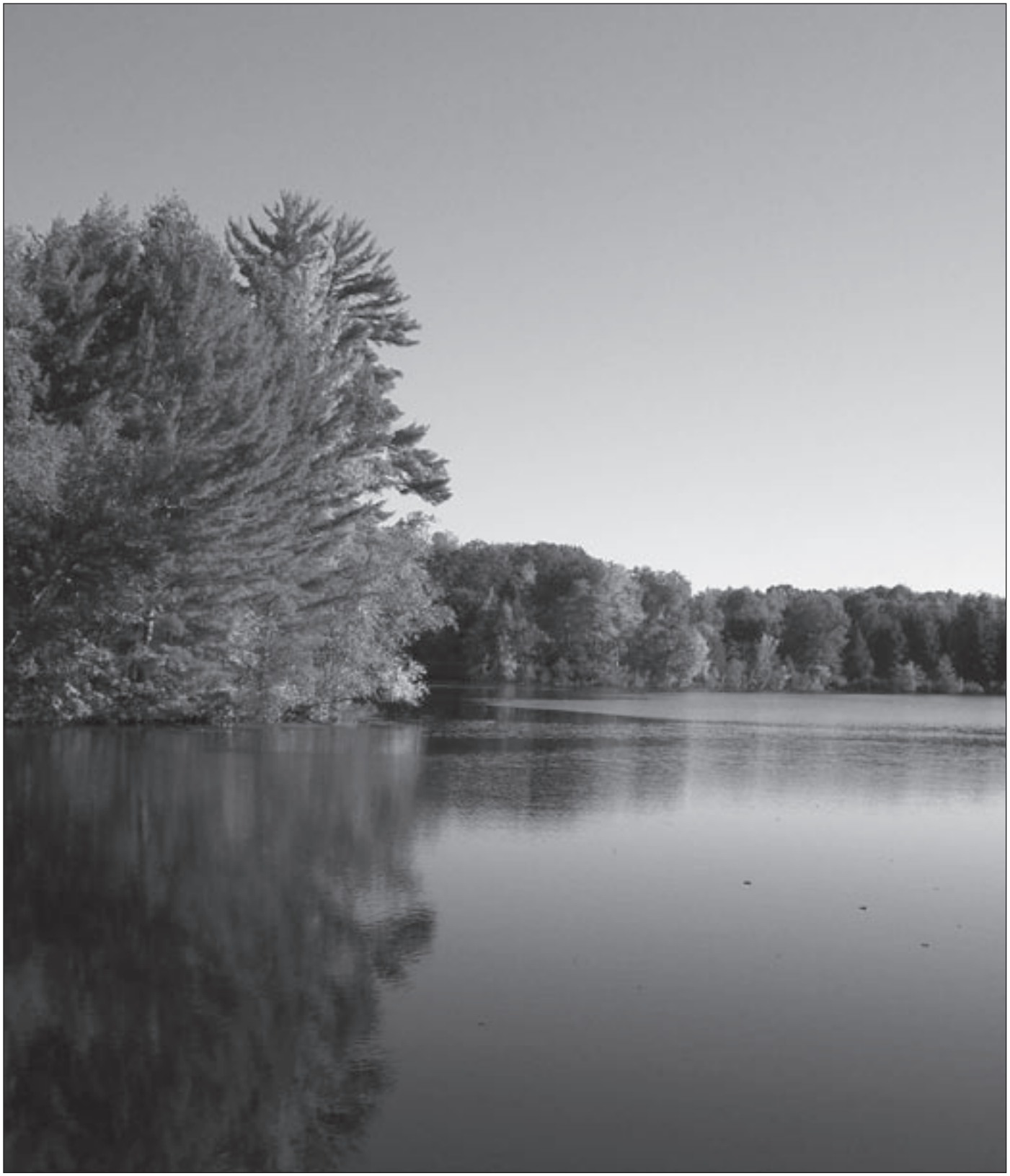
Lowland soils are peat within the Black Spruce Swamps. Poorly-drained mineral soils exist in the other wetland portions of the site. The black spruce swamps are small, but are contained within a larger mosaic and exhibit species diversity that is representative of this community type.

Short and Long Term
Management Objectives (50 & 100 years)

- Develop and maintain an older, closed canopy forest of longer lived species such as white pine on the uplands and both white pine and black spruce on the lowlands.
- Enhance forest structural diversity, tree species diversity, and development of old growth characteristics such as the presence of coarse woody debris and standing dead snags on the uplands.
- Convert red pine plantations to a diverse forest that includes white pine as a major associate.
- Protect and maintain Black Spruce Swamps and Ephemeral Ponds in a natural, unmanaged condition, except for invasive species control
- Protect, maintain and enhance the water quality, riparian habitat, and scenic qualities of the Caldron Falls Flowage.
- Provide opportunities for scientific research.
- Provide recreation opportunities that generally focus on activities such as hiking, bird-watching, photography, and nature study.

Resource Management Prescriptions
The General Forest Management Prescriptions apply and all of their associated management activities apply, except as limited by the prescriptions below:

- Use thinning and other harvest techniques to release and favor white pine, where possible. Maintain a component of scrub oak for diversity and wildlife benefits.
- Actively manage red pine plantations primarily through thinning and natural regeneration techniques to create stands with a natural appearance, large diameter trees grown to biological maturity, an increased dominance by longer-lived species such as white pine.
- Retain standing dead snags and coarse woody habitat whenever their retention does not conflict with other forest management objectives, including riparian areas.
- Refer to the DNR Old- Growth Handbook to guide management decisions, particularly information related to "Managed Old-growth" forests. Use monitoring information on changes in composition and structure to aid in future management decisions.
- Passively manage the Black Spruce Swamps, Ephemeral Pond(s), and immediately surrounding areas.
- Salvage generally will not occur in passive areas unless necessary to meet statutory responsibilities for fire protection or pest control. In actively managed areas, salvage of trees damaged by wind, ice, fire, and insects, may occur after consultation with managers from affected DNR programs to determine how salvage can be done to help meet the objectives of the area.
- Maintain the Caldron Falls Flowage in a natural appearing condition (see Shoreland Management Overlay Zone Prescriptions).



AREA 6 NATIVE COMMUNITY MANAGEMENT AREA

HIGH FALLS NORTH

This 101 acre Native Community Management Area—with an additional 20 acres in private ownership—is located on the northernmost end of High Falls Reservoir, just north of Old Veteran's Lake Campground. The mouth of the Big Eagle Creek is directly across from this area. The site includes areas on both sides of the flowage, encompassing about one mile of shoreline.

Description of the Forest Resource

The site is a complex of dry oak forest and aspen forest interspersed with Bedrock Glades and scattered remnant conifer stands. The major ecological features are Bedrock Glades embedded within Northern Dry Forest and Northern Dry Mesic Forest, two forest types that are representative of this landscape. The area is hilly and contains numerous granite outcrops, both along the shoreline, and further inland. The Bedrock Glades have the potential to support rare plants, and the forest is representative of this community type in the area. Most of the soils, with the exception of a few low lying pockets, are dry and sandy. A designated snowmobile trail runs through this area on the southerly side of the flowage. The understory is generally open, but has varying amounts of red maple and white pine seedlings and saplings.

AREA 6 SUMMARY

- 101 acres in state ownership.
- 20 acres privately owned.
- Opportunity to manage for a mature forest with unique Bedrock Glade inclusions.

Soils and Habitat Types

The soils of this area are mostly dry and sandy, although a few areas are somewhat low lying more mesic. The habitat type for most of the area is PArVAo which is a dry, soil nutrient deficient habitat type. The dominant shrubs are blueberries, raspberries, sweet fern, hazel, and juneberry. The dominant ground flora includes bracken fern, wild lily-of-the-valley, wintergreen, spreading dogbane, starflower, and wild strawberry. The climax tree species on this habitat type are white pine and red maple.

MAP 2.9 | HIGH FALLS NORTH

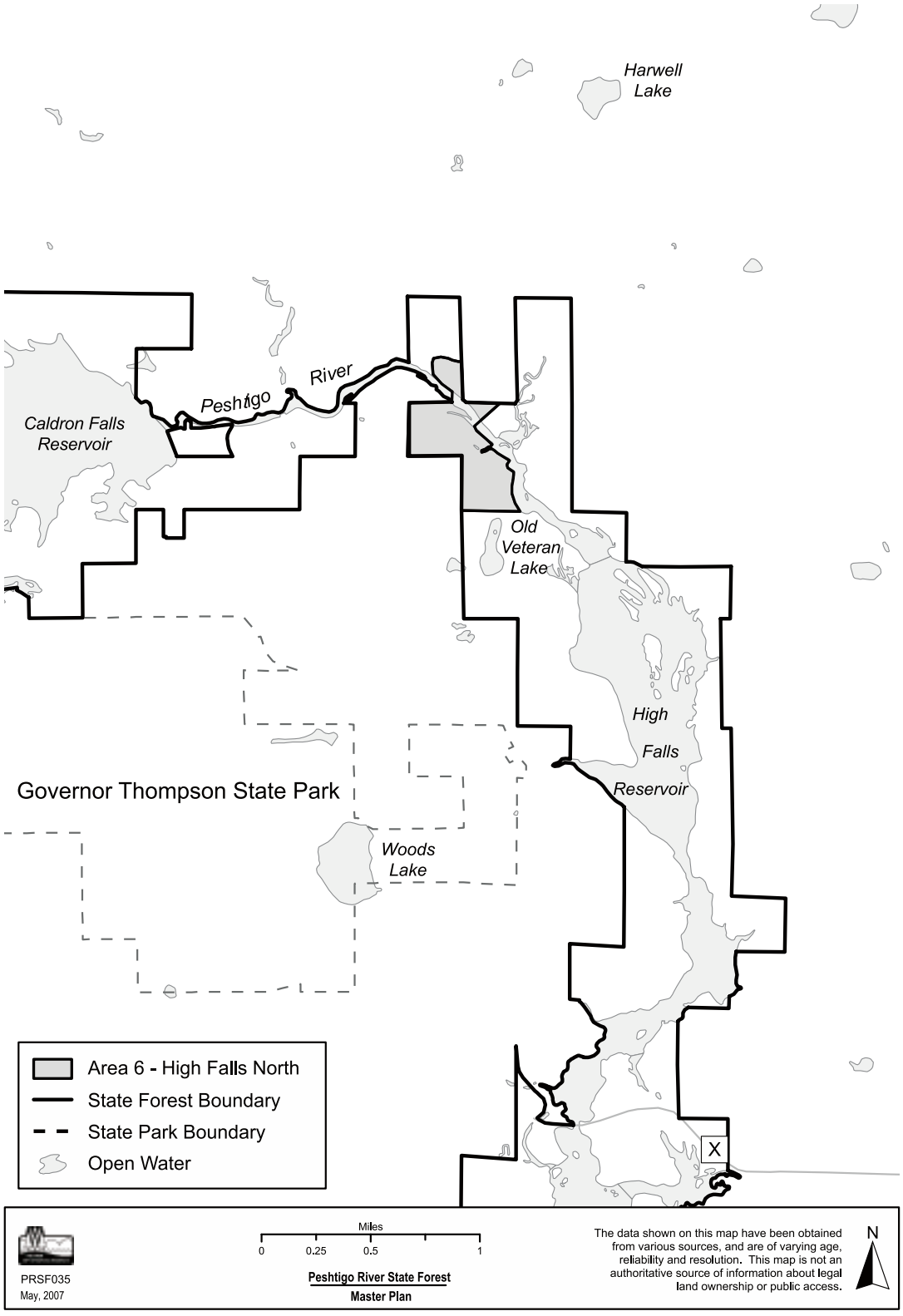


TABLE 2.6 HIGH FALLS NORTH CURRENT AND FUTURE LAND COVER

COMMUNITY TYPE	CURRENT		PREDICTED 50 YEAR	
	ACRES	% OF TOTAL AREA	ACRES	% OF TOTAL AREA
Scrub Oak	77	76%	0	0%
Aspen	16	16%	0	0%
Rock	4	4%	4	4%
Water	4	4%	4	4%
White Pine	0	0%	33	33%
Red Maple	0	0%	60	59%
Total	101	100%	101	100%

Short and Long Term
Management Objectives (50 & 100 Years)

- Protect and enhance the Bedrock Glades and all other rare species habitats and high-quality natural communities that are present.
- Enhance forest structural diversity and a mixed species composition, increase the dominance of longer-lived trees, particularly white pine, and develop of old growth characteristics such as the presence of large diameter trees, coarse woody debris, and standing dead snags.
- Red maple should increase and aspen and oak will decrease, but a component of each should be maintained in the overstory where possible to contribute to diversity.
- Increase the dominance of longer-lived trees, particularly white pine.
- Provide opportunities for scientific research.
- Provide recreation opportunities that generally focus on activities such as hiking, bird-watching, photography, and nature study.

Resource Management Prescriptions

The General Forest Management Prescriptions apply and all of their associated management activities apply, except as limited by the prescriptions below:

- Maintain portions of the glades in a mostly open condition, where possible, with scattered large trees to favor light-demanding and intermediate glade and dry-forest/woodland associated plants.
- Decrease the amount of aspen and scrub oak and increase white pine primarily through thinning and natural conversion and promote the growth and retention of red maple and large white pine trees. Use techniques such as partial cutting, thinning, and group selection when necessary.
- Retain snags and coarse woody habitat whenever their retention does not conflict with other forest management activities or present hazards.
- Prescribed fire could be a potentially useful management tool for improving understory species diversity and enhancing the native communities.
- Refer to the DNR Old-Growth Handbook to guide management decisions, particularly information related to "Managed Old-growth" forests. Use monitoring information on changes in composition and structure to aid in future management decisions.
- Minimize the visual impact of forest management activities in areas near Old Veteran's Lake Campground.
- Salvage of trees damaged by wind, ice, fire, and insects, may occur after consultation with managers from affected DNR programs to determine how salvage can be done to help meet the objectives of the area.

AREA 7

NATIVE COMMUNITY MANAGEMENT AREA

JOHNSON FALLS

This area encompasses 251 acres (including 45 acres in private ownership) on both sides of the Peshtigo River from just below the Johnson Falls Dam to the mouth of Medicine Brook. This portion of the river flows through a narrow rock and sand-bottomed valley with steep slopes and gently rolling sand plains above the valley. The area is diverse and complex in terms of hydrology, topography, soils, and vegetation and supports a mosaic of good quality natural communities including Northern Dry-mesic Forest, Northern Wet-mesic Forest (cedar swamp), Bedrock Glade, a small Hardwood Swamp and inclusionary seeps, springs, and spring runs. Several rare plants and high-quality natural communities, as well as a State-Threatened animal are known from this site.

Description of the Resource

The Peshtigo River runs through the area with many springs, seeps, and creeks of various sizes flowing into the river, including Joy Lake Creek and the Medicine Brook. The topography varies from flat and wet to steep and dry, with some areas of rock outcrops. Steep slopes, rising 200 feet in elevation, are located on the south side of the river. The primary timber types found here this area are cedar, fir/spruce, scrub oak, aspen, natural red pine, and planted red pine.

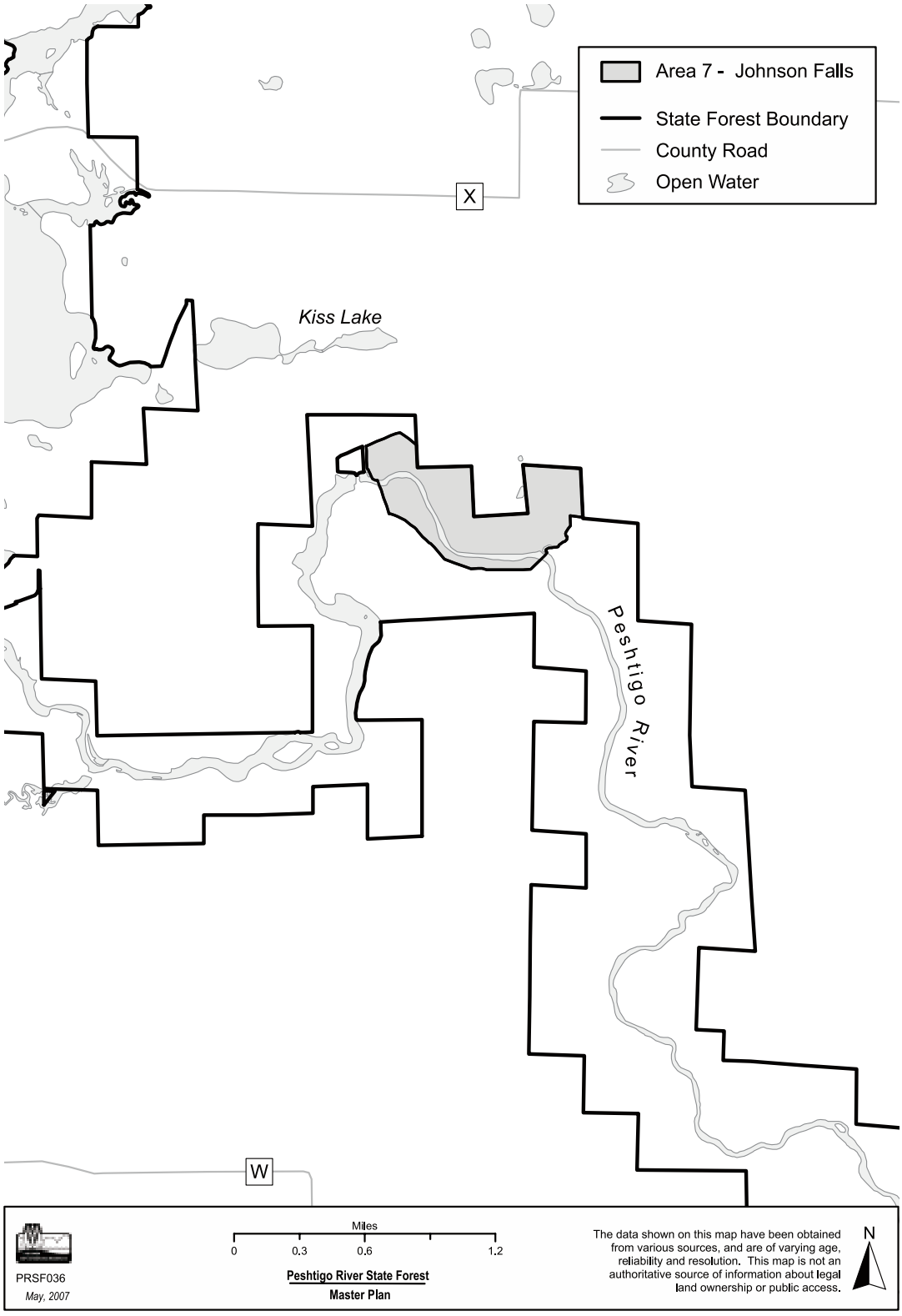
The Northern Wet-mesic forests (cedar swamps) are found on the north side of the river, generally away from the river's edge. They exist because of the growing conditions created by the numerous springs and seeps, which provide a constant supply of fresh subterranean water favoring cedar growth and longevity. The cedar stands consist of pole and sawtimber size trees which are 90-120 years old. These stands were logged several decades ago, as evidenced by the stumps which are present. These stands will not regenerate to cedar without the proper disturbance while concurrently reducing the deer herds which yard in these stands. The cedar may eventually succeed to balsam fir in places, as it shows a great tendency to regenerate in the cedar, and is presently found in all size classes. Three Special Concern plant species have been documented in these cedar swamps.

The fir/spruce timber type is a catch-all for a large portion of this land management area on the north side of the river. This area contains a diverse group of tree species such as white pine, scrub oak, aspen, and red maple, but balsam fir of all sizes is most prolific and tends to out-compete white pine as the climax species. Also, noteworthy in these stands are scattered super canopy white and red pine, and rocky outcrops. Scattered jack pine are found here which are approximately 90 years old and date back to the construction of the Johnson Falls Dam.

AREA 7 SUMMARY

- 206 acres in state ownership.
- Opportunity to manage for high-quality communities and rare species.
- Designated State Natural Area.

MAP 2.10 JOHNSON FALLS



The majority of the scrub oak in this land management area is located in stands adjacent to, or near High Falls Road, on the north end of the area. However, scrub oak is found scattered throughout much of the land management area, especially on rock outcrops where it maintains itself on the thin soil. The scrub oak is generally saw timber sized, and these stands will eventually succeed to white pine and red maple, which are already found in the understory. The scrub oak stand located along High Falls Road has a small creek in it which drains out of a cedar swamp found on adjacent private land. A small grove of very large red and white pine is found near this creek.

Aspen clones and individual trees are scattered on the uplands in much of this land management area. Stands of aspen are found in 2 areas: one area is along the Medicine Brook on the north side of High Falls Road, and the other area is on the south side of the river just downstream from the dam. In both areas the aspen is old (75+ years), generally large, and succeeding to white pine, red maple, and balsam fir.

The only stand of natural red pine in this land management area is located on the south edge of the river, on a steep slope, facing directly north. The stand is approximately 300 feet wide and rises approximately 200 feet in elevation from the water's edge. Springs and seeps on are not present on this slope. The timber type for this stand is best described as large diameter red pine over hemlock of various sizes. The hemlock component is unusual for the Peshtigo River State Forest, particularly since regeneration is occurring here. Apparently, the climax species for this stand is hemlock which is favored by the extreme north aspect. White pine is a minor component of this area. Small red pine plantations are located along High Falls Road—the largest comprising about 8 acres in the northeast part of the land management area. The red pine is pole sized and occurs on gently sloping ground.

Soils and Habitat Types

The forest habitat type on the uplands is primarily PArVPo, which has a dry-mesic moisture regime, and a poor to medium soil nutrient regime. The dominant shrubs on this habitat type are hazel, blackberry, blueberry, chokecherry, juneberry, and bush honeysuckle. The dominant ground flora are bracken fern, wild lily-of-the-valley, whorled loosestrife, spreading dogbane, starflower, and hairy Solomon's seal.

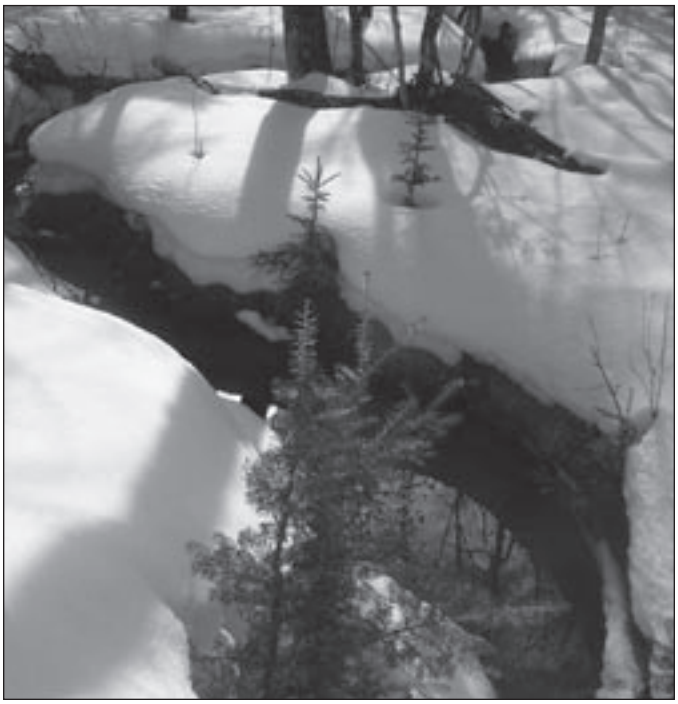
State Natural Area

The Johnson Falls State Natural Area encompasses 251-acres including 45 acres in private ownership. Note: the inclusion of private acres does not prevent the owner from conducting legal management activities on their land, nor does it inhibit them from selling their land to whomever they desire. However, if the owner wishes to cooperate with the Department in a management plan or acquisition, the Department would work with those landowners.

Johnson Falls has a diverse mosaic of good quality natural communities including pine forest, cedar swamp, bedrock glade, springs and seeps. Steep topography and variable slope and aspect lends to numerous changes in composition over short distances. Several rare plants find suitable habitat at this site.

TABLE 2.7 JOHNSON FALLS CURRENT AND FUTURE LAND COVER

COMMUNITY TYPE	CURRENT		PREDICTED 50 YEAR	
	ACRES	% OF TOTAL AREA	ACRES	% OF TOTAL AREA
Red Pine (planted)	10	5%	10	5%
Red Pine (natural)	18	9%	18	9%
White Cedar	30	14%	30	14%
Fir/Spruce	80	39%	80	39%
Scrub Oak	25	12%	0	0%
Aspen	43	21%	0	0%
White Pine	0	0%	23	11%
Red Maple	0	0%	45	22%
Totals	206	100%	206	100%



Short and Long Term
Management Objectives (50 & 100 years)

- Develop and maintain a diverse mosaic of high-quality native communities, including forested areas with old-growth attributes, Bedrock Glades, Forested Seeps, and springs in a natural, unmanaged state.
- Allow cover types to convert naturally to favor longer-lived species.
- Protect rare species habitats (four rare plants at the time of this writing).
- Protect, maintain, and enhance the water quality, riparian habitat, and scenic qualities of a stretch of the Peshtigo River.
- Convert red pine plantations to a diverse forest that includes white pine as a major associate.
- Provide opportunities for scientific research.
- Provide recreation opportunities that generally focus on activities such as hiking, bird-watching, photography, and nature study.

Resource Management Prescriptions

- Passively manage all areas that are not red pine plantations to allow for the development of white pine and other long-lived species, as well as increased coarse woody debris, standing snags, and tree age diversity.
- Actively manage red pine plantations primarily through thinning and natural regeneration techniques to create stands with a natural appearance and large diameter trees grown to biological maturity. Retain snags and coarse woody habitat whenever their retention does not conflict with other forest management activities or present hazards.
- Salvage generally will not occur in passive areas unless necessary to meet statutory responsibilities for fire protection or pest control. In actively managed areas, salvage of trees damaged by wind, ice, fire, and insects, may occur after consultation with managers from affected DNR programs to determine how salvage can be done to help meet the objectives of the area.
- Control of invasive plants may occur throughout the management area.

AREA 8

NATIVE COMMUNITY MANAGEMENT AREA

KIRBY LAKE HARDWOODS

This 158 acre native community area is located on both sides of the Peshtigo River at the southernmost end of the Fly Fishing Area—just north of the Sandstone Flowage and approximately 0.3 miles east of Kirby Lake. The majority of the 158 acres is located on the east side of the river, and consists of a long, narrow strip of land, lying between the river and the top of a steep, west facing slope. This strip of land averages about 500 feet in width, and is about 1.25 miles long.

Description of the Forest Resource

The major features of this area are patches of Northern Wet-mesic Forest, mature rich Northern Mesic Forest, spring seepages, and four Special Concern plants. Cedar is regenerating in some portions of the cedar swamp and is present in several size classes; this is a rare situation locally and statewide. The Northern Mesic Forest patches occur on river terraces and, although small, contain a rich ground flora that is a rarity in this part of the state. Northern Mesic Forest of any type exists only on narrow bands of steep slopes in other areas of the forest and is rare throughout the Northeast Sands Ecological Landscape.

The forest on the west side of the river is primarily cedar swamp with 8-20" diameter white cedar and white pine. Other (subcanopy) species include paper birch and black spruce, and the sapling layer is dominated by cedar along with balsam fir, black spruce, white birch, black ash, red maple, and white pine. The hardwood areas of the site are Northern Hardwoods dominated by red oak, basswood, sugar maple, white pine, and white oak. The sapling layer includes sugar maple, white ash, and balsam fir. The slopes here are moderate, in contrast to the steep slopes present across the river.

The forest on the east side of the river primarily consists of two timber types, namely, red oak uplands and conifer dominated seeps. The red oak stands include a red maple. In scattered patches, large, old aspen dominates the stand. The understory in the oak stand contains red maple, sugar maple, ash, and some conifers, especially closer to the river's edge. The conifer dominated seeps are found on the slopes and adjacent to the river, and are dominated by white cedar, white pine, balsam fir, and hemlock.

AREA 8 SUMMARY

- 158 acres.
- Small, but unique examples of Northern Wet-mesic forest and Northern Mesic Forest.
- Opportunity to manage for a mosaic of communities with spring seepages bordering a free-flowing stretch of the Peshtigo River.
- Opportunity to protect unique habitats supporting several rare plant species of Special Concern.
- Designated State Natural Area.

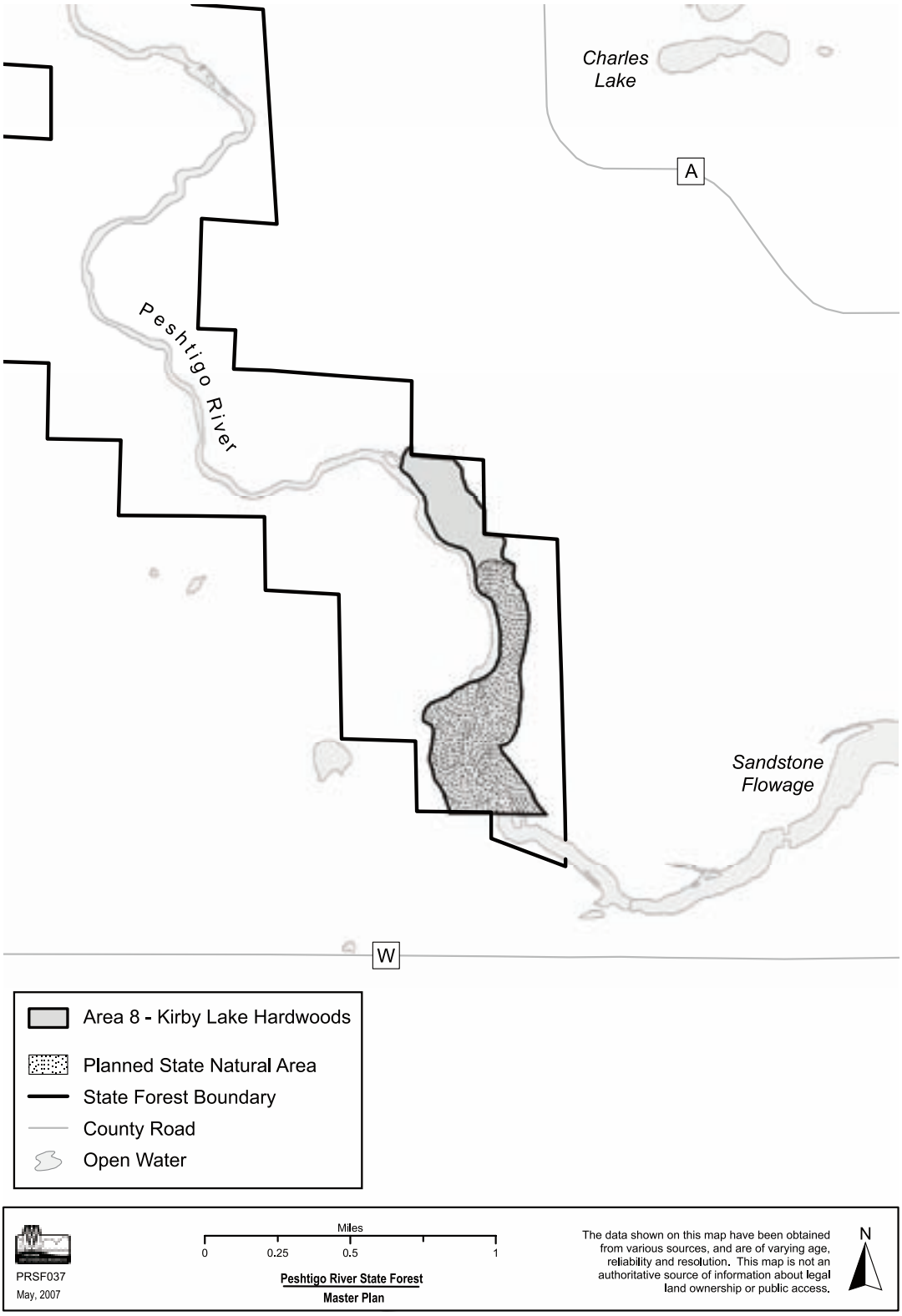
Soils and Habitat Types

The soils of this area differ from the majority of the Peshtigo River State Forest, as they are richer and support mesic hardwoods.

State Natural Area Designation

The Kirby Lake Hardwoods State Natural Area ecompasses 111 acres. Moist hardwood forests are rarely found in the Northeast Sands Ecological landscape. The hardwoods harbor a rich ground layer including rare plants. Although the canopy is relatively young, the stand will develop old-growth characteristics as it matures. Several active forested seeps add to the site's diversity.

MAP 2.11 KIRBY LAKE HARDWOODS



Short and Long Term
Management Objectives (50 & 100 years)

- Develop and maintain a forested natural community mosaic that includes a variety of forest types and old growth characteristics including enhanced forest structural diversity, a mixed species composition, and development of coarse woody debris and standing dead snags. The maple and white pine components are expected to increase, whereas the red oak and aspen will be reduced, but not eliminated from the site.

- Provide opportunities to compare active versus passive management techniques with regard to their effects on forest structure, composition, and other attributes within this management area.

- Protect and maintain examples of rich Northern Mesic Forest, a community type that is rare throughout this landscape.

- Protect and maintain the unique hydrology of the site, including the many seeps and springs.

- Protect native communities and other rare species habitats (there have been four rare plants documented here at the time of this writing) and high-quality examples of natural communities in a natural, unmanaged state.

- Provide opportunities for scientific research.

- Provide recreation opportunities that generally focus on activities such as hiking, bird-watching, photography, and nature study.

Resource Management Prescriptions
The General Management Prescriptions apply and all of their associated management activities apply, except as limited by the prescriptions below:

- Use single tree selection or group harvest to promote tree species diversity and hasten development of larger diameter trees for the portion of the native community which is outside of the State Natural Area (This area is the northernmost ca. ¼-mile of the management area on the east side of the river and is north of the forest seeps).

- Passively manage the State Natural Area to prevent soil disturbance and allow natural conversion to a forest with old growth characteristics. Passive management will also apply to the portion of the State Natural Area within the Shoreland Management Overlay Zone.

TABLE 2.8 KIRBY LAKE HARDWOODS CURRENT AND FUTURE LAND COVER

COMMUNITY TYPE	CURRENT		PREDICTED 50 YEAR	
	ACRES	% OF TOTAL AREA	ACRES	% OF TOTAL AREA
Red Oak	90	57%	0	0%
Red Maple	0	0%	110	70%
Aspen	20	13%	0	0%
White Pine	0	0%	16	10%
Cedar	23	15%	23	15%
Fir/Spruce	16	10%	0	0%
Water	9	5%	9	5%
Total	158	100%	158	100%

- Manage the river corridor outside of the State Natural Area using the prescriptions described in "Shoreland Management Overlay Zone" section of the plan.

- Salvage generally will not occur in passive areas unless necessary to meet statutory responsibilities for fire protection or pest control. In actively managed areas, salvage of trees damaged by wind, ice, fire, and insects, may occur after consultation with managers from affected DNR programs to determine how salvage can be done to help meet the objectives of the area.

- Control of invasive plants may occur throughout the management area.

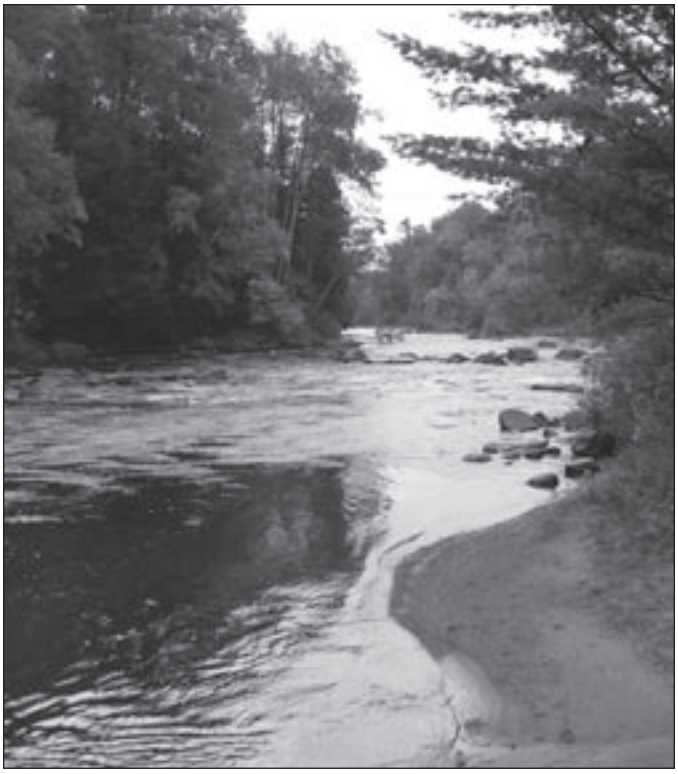
SHORELAND MANAGEMENT OVERLAY ZONE

The Shoreland Management Overlay Zone is located along the flowages and river as a 200-foot land management overlay zone.

Under the terms of the purchase agreement with Wisconsin Public Service Corporation (WPSC), the Department assumed certain shared responsibilities to manage the flowage lands to meet Federal Energy Regulatory Commission (FERC) license requirements. Primarily, these responsibilities relate to maintaining public access and uses of the flowage and lands, and maintaining the scenic quality of the flowages and river. The FERC requirements primarily focus on the shorelands. A 200-foot Shoreland Management Overlay Zone along the river and flowage shorelines will be designated as an Overlay Zone (see Map 2.1) that provides additional objectives and resource prescriptions for management. The objectives and resource prescriptions for lands located in the Overlay Zone must be followed in addition to the underlying land management designation.

Under the license requirements, management must protect soils, water quality, fishery and terrestrial resources, and provide public recreation access to the river and flowages. The establishment of new trails and campsites within the Shoreland Management Overlay Zone requires FERC approval. The Department has the authority to set and charge fees and to determine the need and scheduling of maintenance on all boat landings. Under the terms of the FERC license, vegetative management within the 200-foot zone that is not covered by the master plan requires specific approval by all of the following parties: the licensee (WPSC), Wisconsin Department of Natural Resources (WDNR), the Federal Fish and Wildlife Service (FWS), and the National Park Service (NPS).

Management objectives and management prescriptions for the Shoreland Management Overlay Zone are listed below. These objectives and management prescriptions shall be considered in addition to objectives and prescriptions for the underlying management area. The more restrictive prescription takes precedence.



Short and Long Term
Management Objectives (50 & 100 years)
Maintain and enhance the highly scenic, natural appearing shoreline of the Peshtigo River and flowages.

- Protect and enhance soils, water quality, and riparian habitats.

- Provide public access to the river and flowages as established by the FERC license agreement.

Resource Management Prescriptions

- Manage to favor large, longer-lived trees such as white pine and red maple on suitable sites. If desirable, underplant pine or other native species to increase stocking levels or for restoration following a disturbance.

- Thin red pine plantations to create a natural appearance and large diameter trees. Over the long term, convert plantations to a diverse forest with white pine as a major associate.

- Harvest dead, diseased and dying trees in order to attain a healthier forest, but retain abundant snags and dead-downed trees, including downed trees in the water.

- Remove and/or control invasive species, and control the spread and impact of disease and insect damage. When doing so, use the most practicable methods with the least negative visual impact on the area.

- Outside of designated public use areas, modify the standard management practices to minimize, to the degree practicable, the visibility of management activities from the water.

- Maintain and enhance or develop recreational facilities related to use and enjoyment of the flowages and river, such as boat access sites, swimming areas, fishing piers, hiking and portage trails, and primitive campsites, as prescribed in the recreation management section of this plan.

- Trees and shrubs may be removed as needed for the development or redevelopment of designated public use areas or sites. Planting and maintenance of native trees, shrubs and turf may be done on these sites for screening, scenic enhancement, or to enhance recreational use of the site.

- Removal of hazardous trees from designated public use sites is authorized.

Under the license agreement WPSC is required to conduct surveys on the flowages for three invasive species, purple loosestrife, Eurasian water milfoil, and zebra mussels and to consult with the Department regarding their removal or control. The specific requirements are to:

- Annually conduct surveys for purple loosestrife to document the size and location of any colony, and remove small colonies by hand. WPSC shall consult with the DNR on removal and control of larger colonies.

- Survey for the presence of Eurasian milfoil every third year (beginning in 1998). If found, the colonies will be documented and the WDNR consulted regarding control.

- Survey for zebra mussels annually, and inspect hard surfaces that are normally submerged during flowage draw-downs. Results of the surveys will be submitted to WDNR, FWS, and the University of Wisconsin-Sea Grant Institute. If zebra mussels are found, the licensee will cooperate with other agencies on their control.

WILDLIFE MANAGEMENT

The Peshtigo River State Forest supports a great diversity of wildlife species, including game, furbearer, and bird species common to Northern Wisconsin. A wide variety of birds migrate through the Peshtigo River State Forest as well. The Peshtigo River itself, whether free flowing or impounded, provides important habitat for many wildlife species. Endangered and threatened species (listed species) on the Peshtigo River State Forest include the following: Osprey, Bald Eagle, Wood and Blanding's Turtle, extra-striped snaketail and pygmy snaketail dragonflies. The Peshtigo River State Forest contains 10 special concern animals including various birds, reptiles, amphibians, insects, and crustaceans.

WILDLIFE HABITAT MANAGEMENT

The wildlife management program on the Peshtigo River State Forest focuses on maintaining and enhancing habitat and assessing the population status of the important game, non-game, and listed species. The abundant wildlife on the Peshtigo River State Forest requires diverse forest habitats in all successional stages from very young through old growth. Diverse and healthy wildlife populations will be maintained by managing the composition and structure of forest habitats integrated with the management objectives and activities outlined for each land management area in the Land Management Section of this plan. Wildlife habitat values are further assured by the wildlife biologists working with foresters on timber sales in order to maximize tree species diversity and improve vegetative structure consistent with the management objectives for the area.

This wildlife management plan has been integrated into the management prescriptions for the individual management areas.

FORESTED HABITATS

Approximately 20% of the Peshtigo River State Forest will be managed in forests dominated by aspen and white birch through clearcut harvests. There will be a diversity of age classes by harvesting some aspen stands before economic rotation and some aspen stands beyond economic rotation. While aspen-birch forests are dominated by aspen, they also contain a mixture of various pines, oaks, maples, and white birch.

Approximately 35% of the Peshtigo River State Forest will be maintained in jack pine and scrub oak forests. Jack pine forests will be managed through a combination of natural regeneration and plantations. Scrub oak forests will be managed with clearcut harvests with scattered reserve oaks and pines. These early successional forest types provide habitat necessary for many species.

Approximately 3% of the Peshtigo River State Forest will be managed in forests dominated by red oak. Red oak stands will be grown to biological maturity (age 90 to 150 years) and regenerated through the shelterwood system. In all types of forest stands, when red oak is present, full-crowned red oak will be maintained as a canopy tree at the rate of 5 to 10 trees per acre across all sites and stands, consistent with the management objectives of the area.

Older forest and closed-forest canopy habitats are underrepresented on the Peshtigo River State Forest. The primary forest types best suited to the soils on the Forest are white pine, red pine, and lowland conifer. Most lowland conifer stands, especially white cedar forests, will be reserved from active management. Many of the rare plants and animals found on Peshtigo River State Forest are associated with this habitat. Designated riparian corridors will also provide areas of older forest. As time passes and more of these stands begin to reflect the characteristics of older forests, the wildlife species that use them should become more prevalent. Passive and active forest management will be employed to meet stand objectives.

The white pine community will slowly increase throughout the Peshtigo River State Forest. Individual trees will be grown to biological maturity. Stands of white and red pine will be thinned from below and grown to biological maturity. Active forest management will allow the slow expansion of white pine throughout the Peshtigo River State Forest. Disease problems may require all large red pine to be removed from new plantation areas.

Approximately 3% of the Peshtigo River State Forest will be maintained in grassy openings. Forest openings and relict barrens communities occur in areas of the Peshtigo River State Forest managed for aspen, white birch, oak, and jack pine. The openings will be maintained by herbicides, mechanical mowing, hand cutting, and prescribed fire.

Long-lived trees such as red oak, white pine, and red pine will be maintained in clearcuts to provide for species and stand composition diversity at densities that will not compromise the objective of the harvest. Small clumps of aspen-birch may be reserved in clearcuts for ruffed grouse budding and cavity trees. A ring of aspen trees may be reserved around grassy openings to slow encroachment into the opening.

Large, full-crowned trees with dens and cavities as well as dead trees (snags) will be maintained on appropriate sites in

all management areas. These trees will be maintained unless they are unsafe, cause aesthetic concerns, or increase insect pests. Forest stands subject to large-scale death from disease, insects, or fire will be salvaged.

NON-FORESTED WETLANDS

All non-forested wetlands, including Northern Sedge Meadows, Shrub-carr, Boreal Rich Fen, and Open Bogs will be protected. These wetlands provide habitat for a wide variety of wetland wildlife including species of special concern. Protective management prescriptions for non-forested wetlands are outlined in the Land Management Section of this plan.

AQUATIC HABITATS

Undeveloped lake and stream shoreline is important wildlife habitat. All undeveloped lake and stream shoreline will be managed to protect water quality, maintain wildlife and fisheries habitat, and enhance aesthetics. Shoreline management will include vegetative zones. They will be maintained by following Best Management Practices for Water Quality when performing all forest management activities.

Ephemeral Ponds and permanent small ponds provide important breeding sites for amphibians and waterfowl. These sites will be protected through vegetative management adapted to minimize impacts and by following Best Management Practices for Water Quality.

ENDANGERED, THREATENED, AND SPECIES OF SPECIAL CONCERN

Individuals of all endangered, threatened, and special concern wildlife species will be protected.

All known critical breeding habitat for these species will be protected or maintained through management. Examples of critical habitat includes sites used for breeding and foraging such as bald eagle and osprey nest sites; wood and Blandings turtle nest sites; wolf den and rendezvous sites; and Red-shouldered and Northern Goshawk nest territories. The Natural Heritage Inventory (NHI) will be checked prior to all timber sales, ground- breaking projects, and recreational and trail development.

INTEGRATED MANAGEMENT

Most of the forest habitat work on the Peshtigo River State Forest occurs through the timber sale program. Activities associated with timber sales directly impact wildlife habitat. Wildlife biologists review all timber sales and provide recommendations to maintain and improve wildlife habitat.

WILDLIFE POPULATION MONITORING

At present, no populations of important game species will be monitored through annual surveys directly on the Peshtigo River State Forest, however these surveys do occur nearby to provide valid population information.

Populations of important endangered, threatened, and species of special concern will be monitored through annual surveys. Species surveyed include bald eagle, osprey, and timber wolf. Rare and uncommon wildlife such as Wood and Blanding's turtles, bull frogs, Red-shouldered Hawks and Northern Goshawks are monitored through reports from staff and citizens. The reports are organized in the Bureau of Endangered Resources' NHI database.

WILDLIFE POPULATION MANAGEMENT

Game species are managed through hunting and trapping seasons. Each game species has a population goal set for a certain local or regional area. Hunting and trapping regulations and population goals are not set through the Master Planning process. Game populations are managed through regulations and goals set by the Natural Resources Board and the Voigt Intertribal Task Force. The public is involved in all stages of this review and implementation process.

WILDLIFE RESEARCH

DNR, tribal and university-sponsored wildlife research may occur on the Peshtigo River State Forest. New research projects may be undertaken if they do not conflict with this master plan.

FISHERIES MANAGEMENT

The water resources in the Peshtigo River State Forest provide habitat for a range of fish communities. User groups such as anglers and Native Americans—via treaty harvest rights—play a role in the management of this resource. Management goals and activities for these waters vary by the type of water and angling potential. The four main water resources within the forest are cool water lakes, warm water lakes, cold water streams and warm water streams. The management for each type of water resource is described individually below.

COOL WATER LAKES

Cool water lakes comprise the major water resource within the forest. These lakes are typically infertile, greater than 100 acres, have clear or slightly stained water and have a maximum depth of more than 20 feet. The typical fish species are walleye, muskellunge, northern pike, largemouth bass, smallmouth bass, bluegill, yellow perch, black crappie, and white sucker. Cool water lakes (impoundments) within the forest include: Caldron Fall Reservoir (outstanding resource water), High Falls Reservoir, Johnson Falls Reservoir, Potato Rapids Flowage, and portions of the Peshtigo River above Sandstone Flowage.

Management Objectives

- Provide a quality harvest as well as trophy opportunities.
- Regularly assess the health of these waters and their fisheries.

Management Activities

- Continue to conduct creel, electrofishing, and netting surveys to statewide monitoring guidelines. Make the results available to the public.
- Set fishing regulations to provide a quality harvest as well as trophy opportunities. Evaluate the regulations to ensure the desired response is occurring in the fishery.
- Stock muskellunge, walleye and trout species on suitable waters that have recruitment problems.

WARM WATER LAKES

There are limited warm water lakes in the forest. These lakes within the forest are typically moderately fertile, less than 50 acres, and have a maximum depth of less than 20 feet. The fishery in most of these waters consists of bass and panfish, but some waters also have significant northern pike populations. These waters have simple fish communities compared to larger lakes. They have fewer habitat types, thus fewer fish species. Most of these fisheries can not sustain high levels of harvest due to their small size and limited fertility. Lakes that fit this classification include: Lackawanna Lake (Oconto County), and several un-named lakes in Marinette County.

Management Objectives

- Provide a quality harvest.
- Provide catch and release fishing opportunities.
- Regularly assess the health of these waters and their fishery.

Management Activities

- Continue to conduct creel, electrofishing, and netting surveys to statewide monitoring guidelines. Make the results available to the public.
- Set fishing regulations to provide a quality harvest as well as trophy opportunities. Evaluate the regulations to ensure the desired response is occurring in the fishery.

COLD WATER STREAMS

These waters have summer water temperatures that do not get above 70 degrees and have moderate flows. The fisheries present in most of these waters consist of brook and/or brown trout. The major waters in the forest that fit this designation are: Eagle Creek, Thunder River, Medicine Brook, along with numerous un-named creeks and a five-mile portion of the Peshtigo River below Johnson Falls Dam (Fly Fishing Area).

Management Objectives

- Maintain and enhance a self-sustaining trout fishery. Improve the food supply, provide cover, and improve spawning substrates.
- Provide a quality harvest as well as trophy opportunities.
- Regularly assess the health of these waters and their fishery.

Management Activities

- Continue to conduct creel, electrofishing, and netting surveys to statewide monitoring guidelines. Make the results available to the public.
- The waters in this group have natural reproduction of the major game species. Continue stocking the Peshtigo River fly fish area (five mile stretch below Johnson Falls Dam site) with trout species.
- Maintain existing trout habitat structures, and perform new traditional in-stream trout habitat improvements as staff and money allow.
- Maintain the special regulation category 5 trout waters between Johnson Falls and Sandstone Flowage.
- Set fishing regulations to provide a quality harvest as well as trophy opportunities. Evaluate the regulations to ensure the desired response is occurring in the fishery.
- Conduct beaver control as necessary (limit dams that slow water flow and increase water temperatures).

WARM WATER STREAMS

There are a limited number of warm water streams scattered throughout the forest. Most of these waters are tributaries of the Peshtigo River. Due to a lack of significant ground water input these waters have summer water temperatures that regularly get above 70 degrees. These waters have moderate to low flows and are usually fertile. The fisheries present in most of these waters are typically the same as the Peshtigo River. Due to their high summer water temperatures they do not have trout. Little, if any, habitat work is conducted on these waters, and none are currently stocked. These streams have adequate natural in-stream reproduction or are adequately stocked by fish from the river or lake they are connected to. The basic statewide fishing regulations currently apply on all these streams, and there currently are no plans to modify them. Representative waters in the forest that fit this classification are: McPearson Creek (Oconto County), and Joy Creek (Marinette County).

Management Objectives

Periodically assess the health of these waters and their fishery.

Management Activities

Continue to conduct creel, electrofishing, and netting surveys to statewide monitoring guidelines. Make the results available to the public.

GENERAL HABITAT MAINTENANCE AND IMPROVEMENT

Losses of habitat and shoreline/bank development are common issues on all these waters. Management activities that enhance habitat (such as tree drops, half logs and bank structures) may be applied on waters, consistent with the site's land use classification, where they would provide a meaningful return to the fishery. Additionally, riparian shoreline and stream bank activities have a tremendous effect on the health of the fisheries. Buffer strips and shoreline restoration is promoted on all waters in the forest.

MANAGEMENT PRIORITIES

All of the above activities will ultimately be limited by financial and workforce constraints. Attempts will be made to maximize efforts to manage these fisheries for the health of the resource first and secondly for public opportunity. Management work will be carried out in accordance with the Upper Green Bay Basin Integrated Management Plan (2001).

FISHING REGULATIONS

Controlling fish harvest through the use of lake and stream specific fishing regulations is the most effective tool in managing the fisheries on our waters. A variety of fishing regulations cover the waters in the Peshtigo River state forest. The types of fishing regulations that are currently in use include closed seasons, bag limits, and length restrictions. These regulations are not set through the master planning process, but through an annual rule making process that involves the local fisheries biologist or warden, conservation congress, DNR secretary, natural resources board, legislature, and the governor. The public is involved at all the stages in this process.

INVASIVE SPECIES

Aquatic invasive species of concern for the Peshtigo River State Forest include Eurasian watermilfoil, purple loosestrife, white perch, round goby, and zebra mussel. Management of invasive species in the waters of the forest will follow Wisconsin's Comprehensive Management Plan to prevent further introductions and control existing populations of aquatic invasive species. Waters already being monitored for aquatic invasive species within the forest include the Peshtigo River and its flowages. Eurasian watermilfoil is also known to be present in several water bodies within the forest, including High Falls Reservoir and Caldron falls Reservoir.

RESEARCH ACTIVITIES

The waters in this area provide unique fisheries research opportunities within impoundments. State and university sponsored studies that have meaningful management applications should be encouraged. These types of studies can provide insight into fisheries issues that will benefit waters well beyond the boundaries of the state forest.

All the waters in the forest boundary have management research value. Issues that are of significant management concern are always changing, and any of these waters may meet the requirements of important future studies. Research activities will be carried out in locations and using methods that are consistent with the management classifications and management objectives in this property plan. Currently, there are no waters that have major ongoing fisheries studies within the forest.

RECREATION MANAGEMENT

BACKGROUND

Recreation on the Peshtigo River State Forest is important to many people and plays an important role in the regional tourism economy. Visitors have been coming to the river and its adjacent lands for generations, and those who vacation or live near the forest know the beauty of its flowages, the diversity of its trails, and the extent of its forests. Recreational opportunities abound on the water and throughout the forest.

Since the forest was established, annual visitation to the Peshtigo River State Forest has increased steadily. The most popular recreational activities include fishing, boating, snowmobiling and hunting. There is also demand for new and improved recreational trails like hiking, mountain biking, cross-country skiing, and horseback riding trails. While the Peshtigo River State Forest does not currently have any designated mountain biking or horseback riding opportunities, there has been a dramatic increase in demand for such opportunities statewide and in the Peshtigo River State Forest area. There has also been increased pressure for additional water camping opportunities. Further, there is a shortage of designated beaches in the area; most people currently swim at a number of boat launches on the flowages.

The Peshtigo River State Forest Master Plan will maintain nearly all of the existing recreational amenities and opportunities that were available under Wisconsin Public Service Corporation management. It also provides for a number of amenity expansions or additions to help meet growing demand. The primary additions include an equestrian campground, more canoe and water-based campsites, the creation of designated day-use areas, several expanded boat landings, and more hiking, horseback riding and mountain biking trails. In addition, an increased emphasis will be put on self-guided interpretive trails to promote forestry awareness and natural history. Recreational amenities are displayed on the Current and Planned Recreation Facilities map on the next page.

RECREATION MANAGEMENT OBJECTIVES

- Provide a range of camping opportunities by maintaining and upgrading existing camping facilities and by establishing new or enhanced facilities including primitive canoe camping, primitive water camping, rustic family camping, indoor group camping, and equestrian camping.

- Provide areas for day uses such as picnicking, boating, swimming as well as passive recreational activities by maintaining and upgrading existing facilities and by establishing two new day use areas—one on High Falls Reservoir and one on Caldron Falls Reservoir.

- Provide access to the waters of the Peshtigo River and its reservoirs by maintaining and upgrading the existing boat landings and canoe access points.

- Provide a system of non-motorized recreational trails by maintaining, and in some cases enhancing, existing trails and by the establishment of new trails and trail segments.

- Maintain designated motorized recreation trails, All-Terrain, and snowmobile trails at existing levels. Establish new connector routes and re-routes of existing trails as needed to more efficiently connect to regional trail networks.

- Maintain and support traditional outdoor sporting activities such as hunting, trapping and fishing, and enhance existing boat landings, access points, and other facilities.

How these objectives will be met is discussed by recreation type on the following pages.

CAMPING

The Peshtigo River State Forest provides a variety of different camping opportunities. They range from rustic camping at the recently acquired Old Veteran's Lake Campground that offers 16 sites to the ten remote, primitive canoe campsites on the flowages.

Several new or expanded camping opportunities are planned, including the development of an equestrian campground, an indoor group camp, and additional primitive water-side campsites. Some of the existing campsites will be renovated as well. These proposals are summarized below by camping type:

Summary of Planned Camping Developments

- Fifteen non-electric campsites will be added to the existing 16 non-electric campsites at the newly acquired Old Veteran's Lake Campground. The existing sites will be redesigned, as needed to meet the Department's rustic camping standards.
- One indoor group camp, with electricity, water, and sleeping accommodations for up to 16 people is planned for the Seymour Rapids area.
- The remote, non-electric primitive canoe campsites will be renovated as needed.
- Nine new non-electric primitive water campsites will be built on Caldron Falls, High Falls, and Johsnon Falls flowages.
- A non-electric equestrian campground will be developed at a site west of High Falls Reservoir and east of Parkway Road where there is access to horse trails.

Old Veteran's Lake Rustic Campground

Many people have come to associate traditional rustic style campgrounds with state forests. Campers are attracted to the small, quiet character of state forest campgrounds in contrast to more modern or developed campgrounds. Typically, these campgrounds range from about 20 to 70 campsites, and often have wider spacing than modern campgrounds. Furthermore, they have only minimal facilities including hand-pumped water and vault toilets. Generally, electric campsites are not provided in this type of campground.

The Old Veteran's Lake Campground, recently acquired from Marinette County, provides this type of camping experience. This facility currently features 16 rustic spur-type campsites adjacent to a small lake, and has vault toilets, hand-pumped drinking water and gravel roads.

TABLE 2.9 CAMPING

SITE	EXISTING SITES	PLANNED SITES	TOTAL SITES
Old Veteran's Lake Rustic Campground	16	15	31
Horse Campground	0	22	22
Indoor Group Camp	0	1*	1
Island Campsites	0	4	4
Canoe & Remote Campsites	10	5	15

**Total capacity for campground would be 16 people*

Another 15 campsites will be added, bringing the total number of campsites here to 31. Existing campsites will be redeveloped, as necessary, to address safety or suitability concerns or to meet the Department's 100 – 200 foot site-spacing standard for rustic campgrounds. Extra vault toilets and a picnic shelter will also be added. This campground site is classified as a Recreation Management Area—Type 4 setting under NR 44.06 and NR44.07.

Indoor Group Camp

Indoor group camps provide an excellent opportunity for groups of five or more people to gather without affecting the experiences of other campers. Such a facility could be used by Boy and Girl Scout troops, church groups, extended family reunions, and other large group gatherings.

One indoor group camp bunkhouse with electricity, water, and sleeping accommodations for up to 16 people, is planned for the Seymour Rapids area. A vault toilet, picnic shelter, driveway and parking area will also be provided. This site was selected because of its scenic beauty and recreational opportunities, easy access to and from the road network, and close proximity to the Peshtigo River.

This facility is classified as a Recreation Management Area—Type 4 setting under NR 44.06 and NR44.07.

Primitive Camping

Primitive campsites generally are widely dispersed, have minimal clearing, have a native soil surface, and are non-electric. Primitive campsites are limited to a tent clearing, fire ring, box latrine, and a picnic table. The Peshtigo River State Forest currently offers some primitive canoe campsites. The current locations of existing designated primitive campsites are shown on Map 2.12: Current and Planned Recreation Facilities. These sites are accessible only by water, stays are limited to one night, and they cannot be reserved. Each type of primitive camping opportunity is discussed below.

Canoe Camping
There are currently ten primitive remote canoe campsites located on three different areas of Johnson Falls Reservoir and the Peshtigo River. These sites are accessible only by water, stays are limited to one night, they cannot be reserved, and they are non-electric. The State Forest Superintendent will renovate the sites as needed.

Primitive Water Camping
Up to nine primitive, waterside campsites will be built along the Peshtigo River and its reservoirs. Several of them will be accessible by foot as well as water. The canoe campsites are accessible only by water and are non-electric.

Three sites will be located on Caldron Falls Reservoir—one near Crane Bay, one between Boat Landings 9 and 10, and one near Boat Landing 9 and the Caldron Falls dam. On High Falls Reservoir, there will be one site north of Old Veteran's Lake campground. Four sites will be located on two islands on High Fall Reservoir, north of Bass Bay. On Johnson Falls Reservoir, one site will be located on the north side of the reservoir.

When locating campsites, the Department will minimize the potential for user conflict. If the Department determines that a conflict exists, the Forest Superintendent has the authority to temporarily close campsites.

Equestrian Campground
An equestrian campground will be developed west of High Falls Reservoir and east of Parkway Road. The campground will include up to 20 rustic individual sites and a group campground. Featured amenities include vault toilets, potable water, a firewood bin, a group gathering area with an open-sided shelter, manure bins, and a corral area. Individual campsites will have fire rings, picnic tables, hitching posts, tent pads and a parking area. Some of the campsites will be drive-through and some will be back-in sites, though none will have electricity. Campsites will be large enough to accommodate large-wheeled units.

Adjacent to this campground will be a group horse campground. This will include two large sites that can accommodate a total of 60 people and their horses. Day-use trail parking would be available near the equestrian campground.

This campground site is classified as a Recreation Management Area—Type 4 setting under NR 44.06 and NR44.07.

DAY-USE AREAS

Day-use areas typically provide activities like picnicking, sunbathing, and swimming. Some sites may also feature scenic vistas, hiking and nature trails, and boat landings, occasionally with fishing piers. There are two existing day-use areas on the Peshtigo River State Forest. One, Stephenson Town Park, is operated under a land use agreement between the state and the Town of Stephenson. The Town Park is also the base and staging area for the Twin Bridge Ski Club, a local water ski club that presents water ski shows for the public.

TABLE 2.10 PLANNED DAY-USE AREAS

TYPE	EXISTING	PLANNED	TOTAL
Parking Fee Areas	0	2	2
Picnic/ Swim Areas	0	2	2
Vistas	0	3	3
Forestry Education Facility *	0	1	1

**Shared with Governor Thompson State Park*

The other, Wayside Park, is located on the Potato Rapids Reservoir just off of Highway 64 and is operated by the Wisconsin Department of Natural Resources.

Two new rustic day-use areas will be developed in addition to the existing day-use areas.

The new East Bay day-use location will be a fee-required area and will provide drinking water, vault toilets, a changing area, a designated beach with a marked swimming area, a picnic shelter with electricity, picnic tables, grills, fire rings, fishing pier, and up to a 100-car picnic area parking lot. The existing boat landing will be renovated to meet accessibility standards. A boarding dock and a paved parking lot with space for 50 boat trailers will be provided.

The Musky Point Beach will be established adjacent to Boat Landing 9 on Caldron Falls Reservoir. Like the East Bay day-use area, Musky Point Beach will be a fee-required area. This day-use area will include drinking water, vault toilets with a changing area, a designated beach with a marked swimming area, a picnic shelter with electricity, picnic tables, fishing pier, grills, fire rings, and up to a 100-car picnic area parking lot. The boat landing and trailer parking will be repositioned from its current location farther to the west. A mobility-impaired accessible boat landing and boarding dock, and a paved parking lot with a space for up to 30 cars and trailers, will be included. All of these facilities are consistent with the rustic development designation in NR 44.

Picnic area parking at both East Bay and Musky Point may be developed in phases, with 50 parking spaces developed at each, initially. Later, as needs indicate, the remaining spaces could be built.

BOAT LANDINGS

With more than 3,000 acres of reservoir surface area, water-based recreation is one of the primary attractions for Peshtigo River State Forest visitors. Existing boat landings have different characteristics regarding their degree of development and type of access to the water. These boat landing types include canoe slides, carry-in, cement plank, and gravel.

TABLE 2.11 EXISTING BOAT LANDINGS

BOAT LANDING	CEMENT PLANK	CAR/TRAILER CAPACITY	PICNIC TABLE	BOARDING DOCKS
West Bay (Landing 1)	X	15		X
Bass Bay (Landing 2)	X	10		
East Bay (Landing 3)	X	20		
Twin (Landing 4)	X	20		
Channel (Landing 5)	X	20		X
Woods Creek (Landing 6)	X	30		X
Rock Cove (Landing 7)	X	40	X	X
Caldron Bay (Landing 8)	X	25	X	X
Musky Point (Landing 9)	X	30	X	
North Bay (Landing 10)	X	15		
Crandall Creek (Landing 11)	X	15		
Roaring Rapids (Landing 12)	X	20		
South Bay (Landing 13)*	X	12		
Thunder (Landing 14)	X	15		
Peshtigo (Landing 1)	X	7		
Potato Rapids (Landing 1)	X	15	X	X

** Within Governor Thompson State Park.*

Accessibility

Federal Law and Wisconsin statutes require that boarding docks provided at boat access sites be handicap accessible. An accessible boarding dock must also be provided with an accessible travel route between it and a designated accessible parking space. All such facilities within the Peshtigo River State Forest will be brought into compliance. This will take place, at a minimum, whenever new facilities are developed or when existing facilities are substantially repaired or replaced.

BOAT LANDING IMPROVEMENTS

Because the distribution of existing boat landings and river access sites provides convenient boat access to the waters and flowages of the Peshtigo River, no new access will be developed. However, a number of repairs, upgrades and improvements would be performed on the existing boat access sites under the master plan. Some, but not necessarily all, sites will receive new vault toilets, drinking water, boarding docks, launch ramp repairs and replacements, and reconfigured or expanded parking areas. All will be brought up to Handicap Accessibility compliance.

Boat Landings #9 and # 3 are included as parts of proposed Musky Bay and East Bay Day Use areas. Each will have its own boat trailer parking lot, separate from the picnic area parking.

In some cases, the overall capacity of the boat trailer parking will be increased. In every case, boat trailer parking and access will be re-engineered to prevent surface runoff from directly entering the lake or river. Best Management Practices for construction will be followed to prevent erosion and sedimentation during construction. Each new or reconfigured parking area will be constructed using appropriate stormwater management practices. This will include the establishment of rain gardens, buffer strips, bio-retention ponds and other measures, depending on the individual site.

The purpose of these increases is to alleviate the overflow parking that takes place along access drives and public roads during heavy use periods. When the parking increases are implemented, the forest will request that parking be prohibited on roadways within ¼ mile of the access site. This would have the effect of providing adequate, organized, off-road boat trailer parking without increasing the overall number of boats using the water.

Boat trailer capacity is regulated by NR 1.91. A discussion of NR 1.91 compliance for this master plan is included in the Environmental Assessment, Chapter 4 of this document, page 107.

TABLE 2.12 BOAT LANDING IMPROVEMENTS

BOAT LANDING	PARKING CHANGES	FACILITIES**	LAUNCH APPROACH	DOCK
West Bay (Landing 1)	Reconfigure existing 15 space lot	Vault Toilet, fishing pier	Paved Approach	Yes
Bass Bay (Landing 2)	Reconfigure existing 10 space lot	N/A	No change	No
***East Bay (Landing 3)	Reconfigure existing 20 spaces and add 30 spaces	Water, vault toilets,	Paved Approach	Yes
Twin (Landing 4)	Reconfigure existing 20 space lot	N/A	Paved Approach	Yes
Channel (Landing 5)	Reconfigure existing 20 space lot; add 20 space lot to the south of existing lot	Vault toilet, water	Paved Approach	Yes
Woods Creek (Landing 6)	No change to existing 30 space lot	N/A	Paved Approach	Yes
Rock Cove (Landing 7)	Reconfigure existing 40 space lot; add new 20 space lot	Vault toilet, water fishing pier	Paved Approach	Yes
Caldron Bay (Landing 8)	Reconfigure existing 25 space lot	Vault toilet, water	Renovate and ramp pave approach & launch	Yes
***Musky Point (Landing 9)	Reconfigure current 30 space parking to the west	Vault toilet, water, fishing pier	Reposition to the west and pave	Yes
North Bay (Landing 10)	Reconfigure existing 15 space lot	N/A	Paved approach	Yes
Crandall Creek (Landing 11)	Reconfigure existing 15 space lot	Vault toilet, water	Renovate and pave approach & launch ramp	Yes
Roaring Rapids (Landing 12)	No changes to existing 20 space lot	Vault toilet, changing rooms, water	Renovate and pave launch ramp	No
South Bay (Landing 13)*	Rebuild to provide 38 trailer parking spaces	Vault Toilets, fishing pier	Rebuild	Yes
Thunder (Landing 14)	Reconfigure existing 15 space lot	Fishing pier	Renovate and pave approach & launch ramp	Yes
Peshtigo (Landing 1)	Reconfigure existing 7 space lot	N/A	Renovate and pave approach & launch ramp	Yes
Potato Rapids (Landing 1)	Reconfigure existing 15 space lot; add 10 new spaces	Fishing pier	Renovate and pave approach & launch ramp	Yes
Medicine Brook	Reconfigure existing 5 space lot	N/A	Add canoe slide	No
Seymour Rapids	Reconfigure existing 10 space lot	N/A	Renovate existing canoe take out and put in	No
Spring Rapids	Reconfigure existing 5 space lot; add 5 new spaces	N/A	Renovate existing canoe take out	No

**Within Governor Thompson State Park.*

*** N/A = none available*

**** Included as part of day use area*

NON-MOTORIZED TRAILS

The Peshtigo River State Forest will continue to offer a variety of designated trails. The phrase "designated trails" refers to trails that are designed, maintained, and limited to specific uses, such as hiking or interpretive nature trails. Currently, there is a designated moderate non-motorized trail system located within the Peshtigo River State Forest. These trails are available for recreational activities including hiking, biking, cross-country skiing and snowshoeing. Designated trails are identified by signage and are shown on the official map of the forest.

In addition to designated trails, the Peshtigo River State Forest offers numerous miles of non-designated "woods roads" which are open to hiking, biking, horseback riding, and snowshoeing (unless posted closed for a specific activity). A "woods road" is generally a primitive single-lane road with two vegetation-free wheel tracks. The tread is usually compacted native soil, often sand or gravel, but sometimes less stable material such as clay or a mixture of sand and muck. The woods road is typically not maintained, therefore washouts and ruts can be encountered.

Hiking

The existing eight miles of designated hiking trails and canoe portage trails will be maintained under the Plan. Day-hiking opportunities will continue to be offered on the woods road network and various other trails.

Three new primitive trails—one around Caldron Falls, one around High Falls, and one around the Potato Rapids Flowage—will be developed. The Caldron Falls trail will be approximately 12 miles in length, the High Falls trail will be about 16 miles in length, and the Potato Rapids Trail will be about five miles in length. The exact lengths of these trails will be determined when the trails are sited on the ground. A primitive trail is a single-file walking path usually established with the native soil as a tread surface. The path is narrow, with little or no clearing done and little or no annual maintenance. It most closely resembles game trails that are kept open due to regular use by deer and other animals.

To promote the sustainability of primitive trails, occasional maintenance will be necessary. Such maintenance may include the placement of culverts or stepping stones at stream crossings, constructing sections of flow-through boardwalk across wetland or seep areas, and other measures to prevent soil erosion and environmental damage.

These trails will be open to hiking and snowshoeing, and will generally follow the shoreline of the Peshtigo River, Caldron Falls Flowage and High Falls Flowage. In addition to using existing trail segments, new sections of trail will be developed. Additional trails will be available for hikers to visit designated scenic vistas. These vistas will be located at The Narrows, High Banks, and Seymour Rock. Finally, a new one mile self-guided, accessible interpretive trail will be developed at Old Veteran's Lake Campground. This trail will also serve as a snowshoe trail in the winter season.

Mountain Biking

A new 15 to 20 mile-long mountain bike loop will be developed. This new trail system will be located within the Spring Rapids Trail System with future expansion into the Seymour Rapids section. This trail system will be designed to challenge a variety of different skill levels. A portion of the trail will be routed on closed forest roads, which would provide a wide tread surface suitable for casual or family biking. A "higher challenge" segment of the trail may also be developed with a narrow course in a hilly area. This development is contingent upon the availability of suitable soil conditions. Under the trail designation, the best available design standards will be employed to ensure sustainability and minimal erosion from mountain bike use. During the redesign process, portions of the trail may be closed. Forest staff will include area mountain bike stakeholders in the development and implementation of a mountain bike trail management plan.

Horseback Riding

The state forest will provide up to 25 miles of designated equestrian trails originating from a trailhead near the planned equestrian campground. The new trailhead will accommodate 20 trailers and would include a vault toilet.

Horseback riding is prohibited on designated nature, hiking, or mountain biking trails. Native Community Management Areas are closed to horses, except on designated trails. Generally, horse trails shall not be sited within Native Community Management Areas and other areas that are highly ecologically sensitive due to the potential for the introduction or spread of non-native, invasive species. Horse trails may be sited in or near these areas if there is a critical need, other viable routes are not available, and/or the potential for significant impacts are determined to be minimal or are mitigated by design. Designated State Natural Areas are closed to horses.

The Peshtigo River State Forest will cooperate with local horse riding clubs to develop the trails using the best available design standards.

Cross-Country Skiing

At present, eight miles of designated cross-country ski trails are available on the Peshtigo River State Forest. In addition to

the maintenance of the current trail system, future expansion is planned. Two trail systems are currently groomed by the Wisconsin Department of Natural Resources in cooperation with a local ski club: the Seymour Rapids and Spring Rapids trail systems.

Some moderate adjustments will be made to the Spring Rapids Trail System to avoid conflicts with creek crossing and user conflicts. Moreover, a trail up to 5 miles in length connecting both systems will be built on state forest land. Cross-country skiing in ungroomed areas is also available across most of the Peshtigo River State Forest. An upgrade to the Spring Rapids trailhead will be made, with amenities to include a vault toilet, water, and a shelter. A new trailhead would be built at the entrance of the Seymour Rapids Trail. Amenities would include a vault toilet and water.

Snowshoeing
Snowshoeing is currently allowed everywhere on the forest except on groomed, designated cross-country ski trails. In addition, the Plan would designate and promote the use of the self-guided nature trail at Old Veteran's Lake Park and the primitive hiking trails along the flowages.

Archery
The existing archery trail will continue to be offered in conjunction with the Woodland Archery Club in the southwest corner of the Potato Rapids property. The archery trail is about 0.25 mile in length, and it will continue to be maintained for the practice of archery skills and holding archery competitions.

MOTORIZED TRAILS

Snowmobile
Currently the Peshtigo River State Forest has over 20 miles of snowmobile trails that link state land with private and county snowmobile trails. Snowmobile trails within the Peshtigo River State Forest are generally developed to NR 44's Lightly Developed trail standards, and are operated on both state and private land. Sections of the trail on private land are used through land use agreements and often operated by snowmobile clubs. Overall, there would be no significant changes to the snowmobile trails located on the Peshtigo River State Forest. Snowmobile trail parking would be available at Boat Landings 3, 5, and 9.

A new snowmobile trail link between the Boat Landing 2 area and Boat Landing 5 is supported in concept, however the details of its route must be agreed upon prior to implementation. This new trail link may or may not be open for winter ATV use, depending on the existing designation of the system it links with.

A minor snowmobile trail reroute will occur in the southeast corner of the Fly Fishing Area. This reroute will move a portion of the present snowmobile trail from private lands and town roads to state forest land. About 3/4 mile of existing logging trails will be utilized in the reroute.

At the discretion of the Forest Superintendent, changes to the Peshtigo River State Forest snowmobile trail system may be made to; ensure safety, to keep snowmobiles off roads as a response to a loss in route access across private lands; if resource degradation develops; and/or if unacceptable user conflicts occur. Any changes must be consistent with the requirements of the area's land use classification.

Cycles, 4x4s, and Other Licensed Motor Vehicles (Forest Road Access)
Licensed cycles, 4x4s, and other vehicles meeting street-legal requirements may operate on open Peshtigo River State Forest roads (including logging roads) that are not bermed, gated or signed as closed. Unlicensed and unregistered motor vehicles are not allowed to be operated on the state forest.

All-Terrain Vehicles
The Department supports the development and maintenance of All-Terrain Vehicle (ATV) riding opportunities on appropriate trails, particularly trails that contribute to regional trail networks. The use of ATVs on the Peshtigo River State Forest is authorized on trails designated for ATV use. ATVs are not allowed on lands, trails or roads not designated for their use.

TABLE 2.13 TRAILS

TRAIL TYPE	EXISTING MILES	PLANNED MILES	TOTAL MILES	NR44 DEVELOPMENT LEVEL
Single-track Hiking	0	33	33	Primitive
Equestrian	0	25	25	Lightly Developed
Mountain Biking	0	15-20	15-20	Primitive
Cross-country Skiing/ Hiking	8	5	13	Lightly Developed
Interpretive/ Snowshoeing	0	1	1	Primitive
Archery	0.25	0	0.25	Primitive
Snowmobile	20	2-5	22-25	Lightly Developed
Winter-only ATV	20	0	20	Lightly Developed
Spring, Summer, and Fall-only ATV	1	0	1	Lightly Developed

The Department will maintain the 20 miles of existing winter-only ATV riding opportunities on existing snowmobile trails designated for ATV use. The winter ATV trails will open and close as determined by the open/close season for snowmobiles. Winter only designated ATV trails are shown on Map 2.12: Current and Planned Recreation Facilities.

The Department will also maintain the existing mile of spring, summer, and fall ATV trails in the southern portion of the forest that connect to the existing regional trail network. Existing trail conditions and design will be evaluated regularly to improve the trail as needed in compliance with current ATV design standards (Appendix F, WDNR 2005).

The Department will cooperate with federal and local governments, private landowners and other interested parties in a public planning process to evaluate potential future trail connector(s) that support a regional trail network.

Future ATV trail development will require review and approval by the Natural Resources Board.

OTHER ACTIVITIES AND AMENITIES

Swimming
Swimming occurs at both designated and non-designated swimming beach areas. A designated beach has a regulatory marker or posted notice. Most designated swimming areas have toilet facilities. Non-designated swim areas are any waters that are not signed as "closed to swimming." State forests do not supply lifeguards at any beaches; swimming is at the user's discretion.

Two new designated swimming beaches will be provided. Musky Point Beach will be developed near Boat Landing 9 on Caldron Falls Reservoir, and East Bay Beach will be developed near Boat Landing 3 on High Falls Reservoir. Swimming beaches will be developed as integral parts of the two new Day Use Areas described earlier in this document. Adequate distance will separate the swimming beaches from the boat access facilities to provide for public safety.

Boating, Canoe Access, and Canoe Trail
With 3,000 acres of water and a number of streams, water-based recreation is a primary attraction for Peshtigo River State Forest visitors. Boating and canoe access sites (i.e. boat landings) will be maintained by the Department. In addition, several upgrades—discussed earlier in this document—are planned at the boat landings as shown in Table 2.12: Planned Boat Landing Development. Portages around the hydropower dams are, and will continue

to be, maintained. An existing canoe portage around rapids in the Fly Fishing Area will be maintained by the forest.

Fishing

Fishing regulations are outside the scope of the Master Plan. The Plan supports fishing primarily by providing water access to anglers, which includes a system of existing angler access trails, boat landings and fishing piers. In most cases, angler access trails will coincide with the primitive hiking trails that parallel the shoreline of the flowages and the Peshtigo River.

Fishing piers are usually located in association with campgrounds and picnic areas. A number of the existing piers are accessible to the disabled. All fishing piers and boarding docks will be accessible. The Forest Superintendent may construct or relocate fishing piers as deemed necessary, consistent with the land use classification standards for the site.

A "Fly Fishing Only" zone exists on the Peshtigo River between the Johnson Falls dam and Sandstone Rapids, a distance of about five miles. Within this zone, anglers are limited to using artificial bait. No live or natural bait is allowed. Special size limits on trout are also in force.

Some boat access sites are open in the winter for ice fishing. The Towns are responsible for the plowing of town roads for ice fishing access.

Hunting and Trapping

Hunting and trapping regulations are outside the scope of the Master Plan. The Peshtigo River State Forest will continue to offer opportunities for small and big game hunting and trapping. The diversity of forest types, lakes and wetlands found on the property would continue to provide high quality habitat for many game species. Miles of logging roads and non-designated trails continue to be open for hunting access by foot and/or motor vehicle.

Education and Interpretation

The Peshtigo River State Forest encourages visitors to take the opportunity to learn about forestry, natural history, wildlife management, and other natural resources topics. Staff have taken part in school programs, camps, and have given talks and tours to area clubs on these subjects.

In the shared facility with Governor Thompson State Park, the forest and park headquarters will have space for regularly scheduled interpretive programs. A planned self-guided accessible nature trail will be created at Old Veteran's Lake Campground.

ROAD MANAGEMENT PLAN

Access across and within the Peshtigo River State Forest is on a variety of roadways—State, County highways, and Town and DNR roads. The Department owns over 6.0 miles of designated management and access roads. Some roads are maintained as permanent management roads, while other roads are only temporary for timber harvesting or other management activities.

Unless closed by a gate, a berm, or a sign, department roads are open to public access with street licensed vehicles. Permanent roads may be closed to the public if they are deemed unsafe due to the condition of the road, because of potential conflicts with timber harvesting, or other management activities occurring in the area. Temporary logging roads are generally open to the public during the period of management and for a short time thereafter to allow firewood gathering.

ROAD CLASSIFICATION AND GENERAL ROAD MANAGEMENT

There are several types of road classifications outlined in NR44.07(3). The classifications reflect a range of development and maintenance standards. The road classifications include primitive, lightly-developed, moderately developed, and fully developed. Each Department managed road will be assigned a development classification as part of the road inventory project described above.

Management of lands along the roads within the Peshtigo River State Forest will reflect the management objectives for the specified area classifications. All road right-of-ways (66 ft.) will continue to be controlled and maintained by their current operator (State, County, or Town).

The Department managed roadways within the Peshtigo River State Forest will be maintained in part according to the following requirements from the Best Management Practices for Water Quality:

- Regularly inspect active roads (especially after heavy rainfall). Clear debris from culverts, ditches, dips and other drainage structures to decrease clogging that can lead to washouts.

- Keep traffic to a minimum during wet periods and spring breakup to reduce maintenance needs.

- Shape road surfaces periodically to maintain proper surface drainage and remove berms on the edge of the road that trap water.

- When dust control agents are used, apply them in a way that will keep them from entering lakes, streams and groundwater.

State, County, and Township Roads

State, county, and town roads within the state forest boundary will continue to be managed by their respective jurisdictions and are outside the scope of the Peshtigo River State Forest Master Plan.

AESTHETIC MANAGEMENT FOR ROADWAY CORRIDORS

Forest management techniques can be adjusted along roadways on the forest to ensure the long-term maintenance of scenic conditions proportionate to the road's level of public use. The Silviculture and Aesthetics Handbook distinguishes three separate road types within the Peshtigo River State Forest including Class A, Class B, and Class C roads (WDNR 1995).

CLASS A ROADS

Travel routes with heavy to medium use or roads where the use is for the specific purpose of enjoying scenery. All State and County roads located are classified as "A" type roads.

CLASS B AND C ROADS

These roads are characterized as having moderate to low levels of aesthetic management. Because the aesthetic management needs are highly dependent on site specific conditions, the

Peshtigo River State Forest Superintendent will determine the classification (B or C) of roadways that do not fall into Class A.

Class B Roads serve a variety of uses where the public traffic load is generally light to medium. Scenic attractiveness is of equal importance to other land management objectives.

Class C Roads are primarily used for management access and public use does not occur or it is infrequent or it is primarily for activities such as hunting, fishing, or berry picking. Aesthetics are considered in the management along these roadways; however, they are secondary to the prescribed land management activities for the area.

MANAGEMENT OBJECTIVES

All management activities on Class A, B, and C roads will follow the guidelines established in the Silviculture and Forest Aesthetics Handbook (WDNR 1995).

- Aesthetic management considerations predominate along Class A roads. These areas should be developed and maintained in the forest environment to the greatest scenic potential for public enjoyment.
- Maintain scenic attractiveness in balance with other management objectives for adjacent lands.
- The appropriate scenic management treatments for each Class B roadway will be determined by the Peshtigo River State Forest Superintendent on a case-by-case basis as management activities are scheduled.
- The specific aesthetic management objective and the appropriate scenic management treatments for each Class C roadway will be determined by the Peshtigo River State Forest Superintendent on a case-by-case basis as management activities are scheduled.

NON-METALLIC MINING MINING POLICY

The Department may use gravel, sand, fill dirt or other fill material from department-owned lands for Department use. Under certain circumstances other government bodies or agencies may also have access to these materials. Section 23.20 of the Wisconsin Statutes states, "the department may permit any town, county, or state agency to obtain gravel, sand, fill dirt or other fill material needed for road purposes from any department-owned gravel pit or similar facility if this material is unavailable from private vendors within a reasonable distance of the worksite. The department shall charge a fee for this material commensurate with the fee charged by private vendors."

All nonmetallic mining in the Peshtigo River State Forest is regulated under the requirements of NR 135 Nonmetallic Mining Reclamation, Wis. Adm. Code, except for sites that do not exceed one acre in total for the life of the mining operation. Site reclamation under NR 135 is administered by the county. NR 135 requires mining sites to be located appropriately, operated in a sound environmental manner, and that all disturbed areas be reclaimed according to a reclamation plan. Department of Transportation (DOT) projects are exempt because DOT projects have their own reclamation requirements. The use of state-owned land by the state and municipalities for gravel pits and sand will continue on a case-by-case basis. New sites will not be permitted where a Geological Feature of Importance has been identified. For a list of features, please see the Important Geological Features section below.

IMPORTANT GEOLOGIC FEATURES

The Peshtigo River State Forest contains some good examples of drumlins, outwash plains and moraines—distinctive landforms left behind by the glaciers more than 10,000 years ago (these glacial features are described in more detail in the glossary). Because many of these glacial features contain high quality sand and gravel deposits, they are slowly being lost over time to sand and gravel extraction and other disturbances.

The Department recognizes the importance of setting aside and preserving representative examples of these non-renewable geological features to serve as a base for geological and ecological educational programs and as a baseline against which to compare sites that become disturbed in various ways. The following are considered the more significant examples of glacial features on the forest that will be protected from mining:

- Head-of-outwash features
- Dune crests
- Bedrock outcrops

REAL ESTATE MANAGEMENT

FOREST BOUNDARY EXPANSION

The Wisconsin Department of Natural Resources has approved the boundary expansion of the Peshtigo River State Forest (Map 2.13). Particular areas of the expansion were selected because of their ability to provide additional ecological, economic, and social value for the property and the region. The approved boundary expansion surrounds the existing ownership of approximately 9,200 acres. If all the land were purchased in the approved acquisition area, the property would be approximately 56,200 acres in size, not including water. Brief descriptions of the expansion areas follow.

The area immediately adjacent to the current boundary would provide additional protection to lands flanking the Peshtigo River and the waterway itself by consolidating existing properties of high conservation value. In addition, new public access points and regional trail linkages could be established.

Acquiring land along the river corridor to the northwest of the current boundary completes the protection of more than 50 miles of the upper Peshtigo River corridor, as well as protects a unique and highly prized section of fast-moving water, Roaring Rapids. This will also create a large continuous block of state, county and National Forest land along the river.

Expanding the boundary to the north maintains a large block of continuous forest land, much of which is currently under the ownership of the Board of Commissioners of Public Lands. It would also block state-owned forest land with county-owned forest land to create a larger, continuous block of public ownership. Another benefit of this acquisition is the increased protection of the Eagle Creek watershed, which flows into the Peshtigo River.

Obtaining additional land to the west of the current ownership would increase protection of the Thunder River—a major tributary of the Peshtigo River—and provides an important buffer around Governor Thompson State Park. In addition, acquisition of this area will connect state and federal forest land in Oconto County.

Finally, acquiring additional land in the disjunct Potato Rapids area will maintain a large block of continuous forest land and establish an easily recognizable boundary, Highway E. It will also provide additional watershed protection and improved public access to the existing Potato Rapids portion of the forest.

ACQUISITION POLICIES

As required by state and federal laws, the Department pays just compensation for property, which is the estimated market value based on an appraisal. At times, it is in the interest of the Department and the landowner for the Department to acquire only part of the rights to a property, or an easement. The Department has a number of easement options available to address these situations.

Landowners within the state forest boundary will be contacted periodically by Department staff to explain the Department's land acquisition program and to see if they have an interest in selling their property. Acquisition priorities within the state forest vary from year to year and are based on a variety of factors, such as resource management or recreation needs and available funding.

Master plan amendments will be done when and as required by Wisconsin Administrative Code NR 44.04 when adding newly acquired lands to the Forest Plan.

AIDES IN LIEU OF TAXES

For all State properties purchased after 1992, the Department makes an annual payment in lieu of real estate taxes to replace property taxes that would have been paid if the property had remained in private ownership. More detailed information on how the Department pays property taxes may be found in a publication entitled *Public Lands and Property Taxes,* PUB-FR-166 or http://dnr.wi.gov/org/land/forestry/publications/PLPT.pdf>.

FUTURE BOUNDARY ADJUSTMENT PROCESS

From time to time adjustments in the Forest boundary are needed. In some cases parcels of land are removed from the boundary to allow alternative, necessary public uses by local governments. In other cases it may be desirable to add small parcels adjacent to the Forest so they can be purchased for resource protection or to meet expanding recreational needs. Property boundary changes of 40 acres or more require approval by the Natural Resources Board. Wisconsin Administrative Code Ch. NR 44 provides a plan amendment process that may be used to make adjustments in the Forest boundary.

EASEMENTS, ACCESS PERMITS, AND LAND USE AGREEMENTS

Easements provide access across state property for utilities, town roads, or county highways. Easements are permanent and would continue to be upheld under the master plan. Access Permits provide access across state property to private ownership within the forest boundary. Land use agreements provide for a variety of uses on state forest property, such as snowmobile trails and other recreational facilities open to the public.

The Wisconsin Department of Natural Resources has a long history of cooperation in managing and maintaining public recreational and community facilities and access.

The Peshtigo River State Forest supports land use agreements with public and private partners that provide public benefits. Land use agreements can be used to facilitate agreements with partners to provide services that help meet the goals and objectives of the forest plan. Existing and future land use agreements will be evaluated on an individual basis and reviewed periodically. Agreements that were in place under Wisconsin Public Service Corporation (WSPC) ownership may continue, if determined to be in the best interest of the public.

New Land Use agreements will follow Department standards for review and approval.

ADMINISTRATION AND OPERATIONS

The following section describes general practices, laws, policies, facilities, and other factors that are applied to all lands of the Peshtigo River State Forest that are under state ownership.

FACILITY MANAGEMENT

New or renovated recreational facilities will be designed according to state building codes and Department design standards and codes. The Forest Superintendent may also close and relocate campsites, renovate facilities, and relocate trail segments as deemed necessary.

The Forest Superintendent may maintain and construct storage buildings, employee housing, and/or other similar facilities to support the management of the state forest, as is authorized by normal Department facility approval processes. The structure's location and design must be consistent with the land classification requirements (NR 44) and the management objectives for the Area in which it is located.

STATE FOREST ROAD ACCESS POLICY

There are currently about six miles of permanent department-managed inventoried roads on the forest and many of these roads are open to public vehicles. All state forest roads are open to public access with street–licensed vehicles unless the road is bermed, gated, or signed closed. Roads are closed to ATVs. The Forest Superintendent may close a road to public use if it becomes degraded, causing unsafe conditions for public vehicles.

State forests, including the Peshtigo River State Forest, regularly open and close forest roads primarily to conduct forest management. Roads open for management purposes are generally open to the public during the management period (one to two years) and a short time thereafter to allow access for firewood collection or other uses. Following this period they are closed with gates or berms. The same general miles are open to public vehicles across the Peshtigo River State Forest over time, but in different locations. This variable condition represents the historic use availability for public and tribal access. Road access for the disabled is provided on a case-by- case basis by permit from the Peshtigo River State Forest Superintendent.

INTEGRATION WITH GOVERNOR THOMPSON STATE PARK

In addition to sharing a boundary, the Peshtigo River State Forest and Governor Thompson State Park share many management and use issues. The goals of this Master Plan call for closely integrated management of both properties, especially with regard to recreational opportunities. As a result, the recreational options for both park and forest visitors will ultimately extend far beyond each of the respective boundaries. Since the park does not have the space necessary to provide a high-quality horse trail network, for example, the state forest will be the primary provider of horse riding opportunities, with the possibility of some trails extending into or through the park.

PUBLIC HEALTH AND SAFETY

All facilities will comply with federal, state, and local health and sanitation codes; such as well testing, campground licensing and wastewater treatment. The Forest Superintendent has the authority to close campsites or campgrounds, trails, and other facilities on the forest when necessary due to health, safety, or environmental damage concerns.

Within designated public use areas such as campgrounds, picnic areas, parking lots, and high use trail systems, trees or other natural elements that are deemed public hazards will be removed. Safety inspections are done at least twice per year.

DISABLED ACCESSIBILITY

All new construction and renovation of facilities will follow guidelines set forth within the Americans with Disabilities Act and also be done in a manner consistent with NR 44 standards of the land use classification of the site where the development is located. Across the Peshtigo River State Forest, the State Forest Superintendent has the authority to make reasonable accommodations for people with disabilities, consistent with the requirements of the area's land use classification.

FIRE SUPPRESSION

As stated in Wisconsin Statutes 26.11, "The Department is vested with power, authority and jurisdiction in all matters relating to the prevention, detection and suppression of forest fires outside the limits of incorporated villages and cities in the state except as provided in sub (2), and to do all things necessary in the exercise of such power, authority and jurisdiction." Forest fire suppression actions within the state forest will consider the property management goals and the threats of the fire to life and property. Appropriate techniques will be used in each event to provide effective fire suppression while minimizing resource damage.

EMERGENCY ACTION PLAN

The property maintains on file an emergency action plan that describes staff response and coordination with other agencies

to natural disasters as they affect public safety and facilities. It is reviewed annually.

AUTHORIZED RESPONSE TO CATASTROPHIC EVENTS

Wildfires, timber diseases and insect infestations shall be controlled to the degree appropriate to protect the values of each management area. Necessary emergency actions may be taken to protect public health and safety. Appropriate management responses to catastrophic events are determined on a case-by-case basis, and action will be taken as appropriate.

FUNDING CONSTRAINTS

Implementation of the master plan is dependent upon staffing and funding, which are set outside of the master plan. Operational funding for state forests is established biannually by the state legislature. Development projects also follow an administrative funding and approval process outside of the master plan. Many of the initiatives in the plan are dependent upon additional funding and staffing support. Therefore, a number of legislative and administrative processes outside of the master plan will determine the rate this master plan can be implemented.

MILITARY ACTIVITIES

Use of the property by the military will be restricted to those uses that are compatible with the objectives of the master plan. Approved military activities would require a special use permit. Military activities that generally occur on state forests include: orienteering training, wilderness camping, cooperative training, and development projects that further the goals of the property, such as trail construction or fish habitat improvement.

RESEARCH

The Peshtigo River State Forest is a good place to conduct experimental trials and research, especially with regard to the many flowages that exist on the property. The research conducted by forest managers, scientists, and partners from universities and colleges can be beneficial for the forest as well as for the Department overall.

REFUSE MANAGEMENT

Refuse is collected by a private contractor from designated sites at campgrounds and other primary use facilities. Recyclable items are collected by Peshtigo River State Forest staff. Visitors are required to carry out any refuse they bring in when no designated refuse or recycling receptacles are available. This carry-in-carry-out policy applies to most primitive campsites, trails, and boat landings. Burying of refuse is not allowed anywhere on the property.

DEPARTMENT AND WISCONSIN PUBLIC SERVICE CORPORATION RESPONSIBILITIES RELATED TO FEDERAL LICENSING OF THE HYDROELECTRIC PROJECTS WITHIN THE PESHTIGO RIVER STATE FOREST

The dams forming the flowages within the Peshtigo River State Forest, Caldron Falls, High Falls, Johnson Falls, and Potato Rapids flowages are hydroelectric projects that are owned and operated by Wisconsin Public Service Corporation (WPSC) and licensed in 1997 by the Federal Energy Regulatory Commission (FERC), an independent regulatory body within the U.S. Department of Energy. WPSC owned the uplands surrounding the flowages created by the dams and managed them with the guidance of a Comprehensive Land and Wildlife Management Plan. The Peshtigo River State Forest was established between 2001 and 2004 when the State acquired the lands and flowages that WPSC no longer needed to operate their hydroelectric dams.

In 2002 WPSC filed an application with FERC to amend the existing licenses to remove project lands and revise the boundaries for the five projects within the Peshtigo River State Forest boundary. The application was approved in 2003 with the condition that WPSC retain within the project boundaries a 200-foot buffer zone along the project reservoirs, certain recreation facilities and all lands for which WPSC holds the flowage rights.

When the Department purchased the lands from WPSC to establish the Peshtigo River State Forest a requirement of the purchase agreement was that the Department assumes a shared responsibility with WPSC for compliance with those terms of the license related to the purchased lands. The WDNR and WPSC have individual roles and responsibilities for managing the Peshtigo River Flowages and will continue to consult regularly to maintain clear understanding of their management roles and objectives. WPSC has the responsibility to assure all conditions of their license are met. However, each is dependent upon the other to successfully fulfill its management objectives. If changes to the management plan agreed to as part of the FERC license agreement become necessary, they may be sought through a formal petition to FERC.

PUBLIC COMMUNICATIONS PLAN

The public and other governments will be provided opportunities to have an on-going involvement in the application of this master plan. This communication plan describes how the public will be periodically informed about activities and developing issues on the Forest, and it provides information on how the public will be notified of opportunities for involvement when significant, new issues related to management of the Peshtigo River State Forest arise.

Annually the Forest Superintendent will issue a report that summarizes the following:

- For the past year, the primary management and development activities that were completed and other significant issues that were addressed.

- For the following year, outline any proposed management and development activities and any changing management actions or approaches.

The annual report may also include other information of interest to the public on various topics related to management and use of the Forest. Some of the additional types of information that may be included from time to time are: the status of forest insect or disease problems, fire or storm damage, new information on endangered or threatened species, recreational management problems or new opportunities, and recreational use changes or trends.

The Forest Superintendent will maintain a list of persons, groups, and governments interested in receiving information about on-going management of the Forest. The annual report will be made available via mail or e-mail to persons on the list. The annual report will also be available to other potentially interested parties on the WDNR Internet Web site.

In the event the Department considers a change to the master plan (plan variance or amendment) all parties on the mailing list will be advised of the proposal and informed of the review and comment process. As appropriate, news releases will also be used to announce master plan amendment and variance proposals and review procedures.

TRIBAL CONSULTATION

The Peshtigo River State Forest Superintendent will consult at least annually with the Mole Lake Band as well as the Great Lakes Indian Fish and Wildlife Commission on state forest management issues related to their treaty rights. Special consultation meetings with the Band will be scheduled as needed, should any issues warrant immediate attention.

CONTACT PERSON

The Peshtigo River State Forest Superintendent should be contacted regarding questions about the State Forest or the master plan. At the time of this publication, the Peshtigo River State Forest Superintendent may be contacted at:

Dan Mertz
Peshtigo River State Forest Superintendent
N10008 Paust Lane
Crivitz, WI 54114
dan.mertz@wisconsin.gov
715/757-3965